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ABSTRACT

This case study describes and critically evaluates two contrasting models of quality management that have been used to support organizational development within De Montfort University, the United Kingdom, during periods of major internal and external change. These models are audited self-evaluation within a developed management structure, a "bottom-up" approach, and strategic quality improvement through high-level process design, a more "top-down" approach. An account of the origins and development of both models is used to illustrate some of the critical issues that need to be considered in adopting either approach. The case study also considers some of the tradeoffs that need to be made in choosing between models of quality improvement based on incremental or transformational change. The study identifies some of the organizational, technical, and cultural issues involved in developing an approach to quality management that is responsive to the corporate and local needs of a university and those of its external stakeholders. Eight appendixes provide supplemental information about the research process. (Contains 10 figures and 13 references.) (SLD)

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Improving the managerial effectiveness of higher education institutions

Perspectives on quality management within a United Kingdom university

The case of De Montfort University

Philip M. Cox

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Perspectives on quality management within a United Kingdom university
A case study of De Montfort University

Working document

Perspectives on quality management within a United Kingdom university

A case study of De Montfort University

Philip M. Cox

Paris 1999

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Chapter 1
Introduction

This case study will describe and critically evaluate two models of quality management, which have been used to support organizational development within De Montfort University (DMU), during periods of major institutional change. For the purposes of this case study, I have defined these models as:

- audited self-evaluation within a devolved management structure (from 1991),
- strategic quality improvement through high-level process redesign (from 1997).

Though not incommensurate, each model provides a contrasting perspective on quality management.

The first model was developed as part of a 'bottom-up' approach to quality management designed to facilitate incremental change around the local needs and aspirations of academic departments, operating within minimal planning controls but tight budgetary constraints.

The second model was developed as a more 'top-down' approach, aimed at achieving step-change improvements in performance, by redesigning the processes through which the university operates, in order to meet the corporate needs of the institution and those of its client groups.

The development of the second model can also be seen as part of a progressive shift in emphasis from quality control (detecting quality

problems) to quality assurance (preventing quality problems) and from incremental quality improvement (doing things better) to quality transformation (new ways of doing things). It also represented a broadening of the 'academic quality' agenda promulgated by national quality agencies, towards a more customer-focused model of 'total quality', which focuses on all aspects of institutional provision.

The paper will explore the origins of each model in terms of the internal imperatives for change facing the university during the period under review.

In essence, the first model was developed as a response to the demands of a rapidly expanding 'distributed' university with campuses spread across the United Kingdom and overseas. In this context, the devolution of responsibilities to schools, departments and location centres was an attempt to promote quality ownership and to ensure an educational provision that was fit for local purpose. The model reinforced responsibilities for the planning, management and review of quality at a local level.

By contrast, the second model was developed as part of an overall strategy for establishing a more 'integrated' university, during a period of limited growth. This strategy was prompted by a growing awareness of the fragmentation caused by devolved decision-making within the university. Measures to improve the planning and management of activities across departmental boundaries (horizontal integration) as well as within the organizational hierarchy (vertical integration) were therefore central to the overall strategy. The development of a university-wide modular curriculum was but one aspect of this strategy for organizational change. The model sought to focus on the performance of institutional processes rather than departmental or functional units.

The development of a change management programme based on corporate rather than local needs was also prompted by recognition that

advances in information technology had the potential to transform how work was undertaken within the university. In particular, it was recognized that electronic networking facilities could make it possible to achieve greater integration within the university, without necessarily reverting to the centralized structures that had characterised earlier stages of institutional development. It was also recognized that such changes would have far-reaching implications in redefining roles and responsibilities within the university, not least in challenging the demarcation lines which have traditionally been drawn between the work of 'academic' and 'support' staff.

Both models were concerned with ways of maintaining and enhancing quality within a declining resource base arising from continued reductions in government funding.

Under the first model improved efficiencies were to be achieved through a system of devolved budgeting which required academic departments to balance their quality aspirations against a resource allocation which was related to their overall performance, including their success in meeting income targets. This approach was designed to reinforce quality ownership (spending within one's means) and to ensure that spending decisions and priorities were related to local needs.

The second model recognized the limits of a policy based on recurrent cuts in departmental expenditure in addressing the financial pressures facing the university. Instead, efficiency savings were to be realized through the redesign and improved management of institutional processes. The model was to build on internal studies which demonstrated the financial and quality 'costs' associated with the failure to plan and manage processes *across* the various academic departments and sites of the university, e.g. duplication of effort, internal competition, and the tendency to fragment the student experience. In short, the model was to give more attention to the costs of quality mismanagement – the quality losses, which result from client

dissatisfaction and the failure to make optimal use of human, physical and financial resources.

The development of both models must be understood in relation to changes in the external environment of the university.

The first model was driven, pre-eminently, by the demands of new quality assurance and assessment agencies set up as a political response to demands for greater public accountability across the whole of the United Kingdom higher education sector. Consistent with government policy designed to promote diversity within the sector, the overarching criterion for quality assessment was that educational provision should be 'fit for purpose'. Universities were, therefore, required to establish policies and systems for quality, which were relevant to their own educational 'missions'.

Opportunities for students, employers and other external stakeholders to inform the goals of higher education institutions have generally been limited. Notwithstanding strictures for institutions to become more 'customer-focused', the methodologies of the national quality agencies have reinforced a 'provider-centred' approach to quality management founded on the conventions of an 'academic quality' model. For the university, the demands of external quality agencies have represented an agenda for continuity rather than change.

The university has recognized that increasing competition from new HE providers and government moves to shift the burden of HE funding from the taxpayer to the 'users' of higher education will demand a more responsive approach to the provision of educational services. In this context, the second model of quality management represented a shift from a provider-centred view of 'academic quality' towards a customer-centred view of 'total quality', which focuses on all aspects of an educational process.

During the period examined as part of this case study, the accountability requirements of external agencies have witnessed a shift of emphasis from the quality of educational provision (and how it is assured) to the standards of student attainment (and how they are defined and assessed). Whilst this is often presented as a change of focus from process to outcomes, both agendas direct attention towards the capacity of internal processes to assure required output standards – whether these be defined as service standards or academic standards.

From a long-term perspective, the impact of national quality agencies on the development of quality systems within higher education institutions may be of secondary importance to the influence of market forces within the sector. It is a contention of this case study that the competitive pressures now facing all universities will require a fundamentally different approach to quality management to that currently being promulgated by external quality agencies.

Problems of implementing the two models of quality management will be discussed in terms of organizational and cultural barriers to change.

All quality systems involve some level of regulation. Within higher education, such regulation has progressively shifted from informal rules, based on professional norms and values, to more explicit codes of practice. Such changes are highly contested. Within an institutional setting, formal regulation is often disputed in the name of 'academic freedom'. Within a national context, the rights of external quality agencies to question how institutions manage their own affairs are frequently challenged under the banner of institutional autonomy. In most instances, quality systems are seen as instruments of external regulation (accountability) rather than self-regulation and improvement (ownership). Unresolved issues relating to the question 'whose quality?' lie at the heart of these tensions within the sector.

The case study will examine the problems associated with measures to promote both ownership (self-assurance) and accountability (assurance of others) within institutional quality systems. This theme will be explored through reference to policies and systems aimed at reinforcing staff responsibilities for the quality and standards of educational provision, within frameworks which ensure due responsiveness to institutional goals, local needs and the expectations of external stakeholder groups. The consideration of these issues will, in turn, raise questions as to the desired balance between top-down (outside-in) and bottom-up (inside-out) approaches to quality management and improvement.

The first model described within this case study sought to promote quality ownership by encouraging staff throughout the organization to ask the questions – 'are we doing things properly?' and 'can we do things better?' The second model started from the assumption that such a bottom-up approach was, in itself, insufficient to deal with the pressures for organizational change facing the university. Such pressures were seen to demand a more focused response to the questions – 'are we doing the right things?' and 'can we do things differently? Although the second model was intended to be interventionist in nature, it presumed a bottom-up implementation of redesign proposals and a cycle of continuous process improvement until the need for further top-down intervention was established.

The contrasting characteristics of the two models of quality management described within this case study may be summarized as follows.

Audited self-evaluation	**Strategic quality improvement**
incremental improvement	step-change improvement
piecemeal change	planned change
bottom-up (inside-out))	top-down (outside–in)
departmental needs	corporate needs
local standards	institutional standards
vertical integration	horizontal integration
functional/disciplinary units	cross–functional teams
performance of functional units	performance of institutional processes
academic quality – provider focus	total quality – customer focus
controlling quality – detecting problems	assuring quality – preventing problems
doing things better	new ways of doing things

The case study examines how each model has been used to underpin different approaches to organizational development within the university. It considers some of the trade-offs that need to be made in choosing between models of quality improvement based on incremental or transformational change. Finally the study suggests, through an examination of the DMU experience, some of the key issues that must be addressed in developing and sustaining an institutional quality system.

The principles and practice underpinning the DMU approach to quality management can usefully be examined in the light of calls for national systems

of quality assurance founded on the institutional capability for self-evaluation and improvement rather than on 'inspection' principles. In this context the paper identifies, through a review of the DMU experience, some of the generic factors which are seen to have a bearing on the capability for institutional self-regulation.

Chapter II

The changing context of quality assurance in United Kingdom higher education

1. Whose quality?

There are likely to be tensions within any quality system, as to who is responsible for defining quality, the means for achieving it, the criteria and methods by which it will be judged and the purposes of judging it. Whether at an institutional or national level, 'quality' in higher education is a highly contested issue (Barnett, 1992).

In United Kingdom higher education, academics have traditionally been responsible for defining quality and standards, within a shared set of assumptions based on peer review. From this perspective, quality has been assessed through largely implicit criteria (the 'intuitive' model of quality) or by reference to a 'gold standard' model of academic excellence. The latter has invariably focused on the quality of resource inputs (staff, students, and physical resources) and the quality of research and scholarship. Within these traditions, the quality of the educational process and the quality of the student experience have not been matters of central concern.

Demands for institutional change arising from moves towards a mass system of higher education have conspired to challenge the assumptions underpinning this 'provider-centred' model of quality with a variety of stakeholders, including students, employers, professional bodies and national quality agencies, all seeking to impose their own perspectives on quality and how it should be assessed. As Jackson (1997) observes:

'The overarching trend within United Kingdom higher education is one of a progressive displacement of closed professional systems, based around the notion of a self regulating community of academics, by more open, bureaucratic, accountable, administrative and market-orientated systems'.

As a result of these changes, attempts have been made to secure sectoral agreement on a new approach to quality based on the concept of 'fitness of purpose'. From this perspective, quality has no intrinsic characteristics; rather it is relative to the specific purposes or objectives of the service provider and the needs of its client groups.

Attempts to operationalize quality around the principles of fitness for purpose have, however, raised fundamental difficulties that remain largely unresolved. The following questions are relevant in this respect.

- Who should define the purposes or goals of higher education?
- How can the needs of different stakeholders be reconciled?
- Can the purposes of learning (and hence the criteria for quality judgements) be pre-defined?
- What are appropriate purposes or goals for higher education?
- Can a fitness-for-purpose approach to quality be reconciled with the traditions of peer review?
- How is fitness *of* purpose to be determined within an increasingly diverse sector?

Attempts to establish consensus on the mechanisms necessary for assuring quality in higher education have proven no less problematic. Traditionally such mechanisms have been largely informal and again focused around shared values of peer review – academics supervising the quality of each other's work. Where more formal systems have existed, they have

invariably been based on internal or external 'inspection' methods of *quality control*, designed to detect and correct quality problems. The central tenet of *quality assurance* – that quality must be designed into the process – appears to have gained limited currency within the sector.

The reluctance of the sector to embrace this view of quality assurance is perhaps not surprising since it requires an acceptance of the fact that the activities of HE institutions and their staffs can and should be regulated. This may be an uncomfortable prospect for an academic community steeped in traditions of professional and institutional autonomy. Equivocation towards the development of quality assurance systems also reflects a failure to provide convincing answers to the following questions.

- Can quality be planned and managed in higher education?
- Do well-defined quality systems produce quality outcomes?
- What are the cost-benefit relationships of quality systems within higher education?
- Is quality assured for all stakeholders?

It is taken as axiomatic that any quality system will only be effective if those responsible for specified activities and tasks are committed to their successful operation and improvement. Without such commitment quality systems will merely reinforce a compliance culture. However, since all activities involve the provision of a service to another internal or external 'customer', quality ownership must be balanced by appropriate levels of accountability for work undertaken. All quality systems must therefore try to establish an appropriate balance between self-regulation (ownership) and external controls (accountability).

It is evident to most commentators that the quality debate in United Kingdom higher education has been primarily accountability-driven. From a national perspective this raises serious issues as to whether preoccupation

with the criteria and judgements of external quality agencies might be obscuring the improvement needs of individual HE institutions and undermining efforts to promote institutional self-regulation. From an institutional perspective, it can similarly be argued that an accountability-led quality agenda will do little to promote genuine and lasting quality improvement if staffs are simply preoccupied with playing the 'rules of the game'.

These conundrums reflect the difficulties that exist in attempting to import new quality concepts and methodologies into academic communities with their own cultures and working practices. In a sector where formal organizational hierarchies rarely reflect the real power structures within higher education institutions, the use of such concepts to support the management of change is rarely unproblematic.

2. Quality assurance under a binary system of higher education

The emergence of quality assurance as a major issue within United Kingdom higher education is a recent phenomenon. At the beginning of the 1990s, approaches to quality assurance broadly reflected the binary nature of United Kingdom higher education:

- self-regulating universities, offering their own degree programmes, with limited external controls outside of a long-established external examiner system and accreditation by professional bodies for a small range of vocational programmes;
- polytechnics and colleges of higher education (generically referred to as 'public sector' higher education), offering degree and diploma programmes leading to the awards of external bodies and subject to a much higher level of regulation by a range of external agencies.

During the 1980s, United Kingdom universities were not subject to any formal system of quality assurance outside of an external examiner system

aimed at ensuring broad comparability in the *standards* of degree awards across the sector. Such 'academic' standards were to be maintained through a largely implicit set of assumptions, shared amongst the academic community, concerning required levels of student attainment for given levels of award. Universities appointed their own external examiners from within this community to ensure broad comparability of standards between institutions. Though arrangements for defining and assessing required standards lacked clear definition, the set of assumptions for assuring comparable standards remained unproblematic in what was largely a homogeneous sector.

Mindful of demands for increased public accountability within the university sector and fearful of regulatory controls by central government, the Committee of Vice-Chancellors and Principals (CVCP) established, in 1990, an Academic Audit Unit, a self-regulatory body with a brief to carry out independent audits of 'quality systems' within the university sector. This was to be a significant development in terms of the configuration of national agencies established as an outcome of the 1992 Further and Higher Education Act (see point 3 below).

Unlike the universities, polytechnics and colleges of higher education were required from the outset to operate within regulatory frameworks set by the Council for National Academic Awards (CNAA), a body established by Royal Charter in 1964, to regulate the quality and standards of educational programmes offered by institutions within the non-university sector of higher education. This work was carried out through protocols for the initial approval and periodic (five-year) review of all taught degree and postgraduate programmes within the sector. External examiners also had a key role to play in ensuring that degree awards were broadly comparable in standard to those made within the university sector.

Initiatives by the CNAA to devolve many of its responsibilities to individual institutions paved the way for a system of full institutional

accreditation, allowing selected public-sector institutions to quality assure their own programmes and awards, with appropriate external safeguards. Twenty-one institutions, including Leicester Polytechnic (subsequently De Montfort University), were licensed to undertake this work by the end of the 1980s. Through these changes, the Council did much to reinforce the importance of quality ownership, within a framework of external accountability. Such changes were, however, still firmly predicated on the assumptions of a peer review model of quality, as developed within the university sector.

In addition to regulation by the CNAA, 'public sector' higher education was subject to assessment visits by Her Majesty's Inspectorate (HMI), a professional body of government inspectors with a statutory authority to report on quality and standards in the non-university sector of higher education (and, by invitation, teacher education in the universities). The HMI methodology was predicated on a 'fitness for purpose' approach to quality which, together with the codification of quality criteria, the use of quality ratings and the direct observation of teaching and learning, were to have a strong influence on the development of quality assessment methodologies used in the post-binary phase of United Kingdom higher education.

3. The development of a national system of quality assurance

At the beginning of the 1990s, a combination of social, economic and political forces conspired to raise the profile of quality and standards in United Kingdom higher education. The following issues were particularly relevant in this respect.

- The shift to a mass system of higher education (student numbers rising by 80 per cent between 1982/83 and 1994/95).
- Demands for improved value for money (efficiency savings to fund the expansion of student numbers).

- Changing views on the purposes of higher education (an increase in the number/range of programmes offered).
- Demands for HE institutions to be more responsive to the needs of students and other external stakeholders (part of wider measures to introduce 'market forces' into public service organizations).

All of these developments were essentially politically driven, the main themes of this political agenda being that:

- higher education was heavily dependent on the public purse, for which it should be accountable;
- diversity should be encouraged within the sector, though within defined limits;
- external stakeholders required independent assurance that institutions were discharging their responsibilities effectively (recognizing the limits of a market system within an 'imperfect' market).

This political agenda may be said to have created the quality movement in United Kingdom higher education. As Graham and Barnett (1996) remark:

"Management by the state of the discourse of quality is a crucial element in the agenda-setting process and associated belief systems... By setting political agendas, proposing legislation for debate, producing national reports, initiating White Papers, and establishing governmental agencies with remits couched in the terminology of accountability and of quality, arguably the state has caused 'quality' itself and its associated terminology to become common-sense and everyday categories in education".

The themes of value for money, market forces and public accountability were to be key factors in the 1992 Further and Higher Education Act which established for the first time a unified, national quality assurance system for

the whole of the United Kingdom higher education sector. The main purposes of this legislation were to:

- end the system of binary education within British higher education, by giving university status to institutions within the former Polytechnic sector;
- establish a new quality assurance agency, the Higher Education Quality Council (HEQC), to audit the effectiveness of quality assurance systems within all HE institutions (replacing the CNAA and the Academic Audit Unit);
- create new, unified, funding councils for England, Wales and Scotland, with divisions responsible for assessing the quality of educational provision, in specific subject areas, through a system of peer review.

The combined effects of the 1992 legislation led to the establishment of a system of 'collaborative regulation' (Jackson, 1997) in which HE institutions were required to share joint responsibility for defining, maintaining and enhancing the quality of educational provision, with a range of external agencies. Within this framework, institutions were expected to be more explicit in defining their objectives and standards for a quality service and the means for achieving them, whilst the work of national quality agencies was seen as integral to creating and maintaining public confidence in the capacity of institutions to regulate themselves. External review processes were also to define the parameters for quality assurance within the sector including:

- the scope of the quality assurance framework (the activities to be regulated);
- the criteria on which judgements of quality and standards would be based;

- the means of ensuring adherence to the framework;
- the incentives/penalties for improving the quality and standards of provision.

4. A future role for external quality agencies?

The national system of quality assurance established as an outcome of the 1992 Further and Higher Education Act provided a new framework for defining and assessing the quality of educational provision, based on the principles of fitness for purpose. In the words of Burge and Tannock (1993) quality in higher education was to be about:

"... the success with which an institution provides educational environments which enable students effectively to achieve worthwhile learning goals, including appropriate academic standards".

The shift from an 'academic excellence' model of quality has had a broadly progressive effect in promoting a diversification of educational aims within the sector, notwithstanding evidence that peer assessment has continued to reinforce a gold-standard view of quality (well-resourced departments, with strong research records, have invariably performed well in national quality assessment exercises). The external agencies established as a result of the 1992 Act also had, by general consent, a positive impact in promoting the codification of quality systems, particularly within the 'old' university sector.

Despite these relative successes, pressures for changes in the role and configuration of external quality agencies began to develop at two levels: first, demands from HE institutions for a reduction in the perceived burden (costs) of external scrutiny; and, second, concerns regarding the standards of degree awards in an expanding, and increasingly diverse, higher education sector.

With respect to the first issue, deliberations aimed at reducing the overlapping responsibilities of the two major external quality agencies have resulted in the creation of a new, single Quality Assurance Agency (established April 1997) incorporating the quality audit/enhancement functions of the HEQC and the quality assessment functions of the funding councils. The intention of this structural change was to establish a national quality assurance system with multiple reporting outcomes from a single process of engagement with institutions (to include the accreditation requirements of professional bodies).

The second issue, the re-emergence of the 'academic standards' debate within United Kingdom higher education, was prompted by concerns at the growing diversity of subject provision within an expanded university sector, set against the commitments of successive governments to maintain broad comparability in the standards of degree awards. Following a comprehensive study by the HEQC into the feasibility of establishing threshold graduate standards (generic and subject-specific) across the sector, the Dearing Committee of Enquiry into Higher Education set out a framework for the design and development of a standards-based model of quality assurance, to be developed by the Quality Assurance Agency (QAA) in conjunction with higher education institutions. The framework included provision for:

- the creation of 'benchmarking' groups to develop nationally recognized standards of awards at the subject level;
- the development of 'programme specifications' to provide clear, accurate information on the content, delivery and standards of individual programmes, in a form acceptable to students and other external stakeholders;
- programmes to be assessed against internally-set quality objectives and externally-set subject standards:

- nationally registered external examiners reporting to the QAA on the quality and standards of programmes;
- a five-year cycle of institutional reviews to test the effectiveness of institutional processes and systems for assuring the quality and standards of provision against new national codes of practice;
- the development of a national framework of qualifications, with agreed credits and levels of achievement.

In developing these proposals the QAA has sought to introduce a system of regulation which will require institutions to demonstrate what is expected of students (in terms of the outcomes of learning) and how the learning experience will be managed to enable students to achieve required levels of attainment. Though these objectives are laudable, from an institutional perspective the agenda of the QAA remains problematic in the following respects:

- the agenda is primarily focused on the outcomes of learning rather than the means for achieving them;
- the relationship between the standards of awards and quality of educational provision is not explicated;
- the means of reconciling internally-set quality objectives with externally-set subject standards is unclear;
- the quality frameworks remain centred on 'academic' rather than total quality;
- the use of a peer review model reinforces a provider-centred rather than a student-centred approach to quality;
- the methodology reinforces a focus on the detection rather than the prevention of quality problems;

- the incentives (reward or punishment) for quality improvement remain limited;
- the focus on quality and standards at the subject/programme level is likely to inhibit institutional change;
- the model remains accountability-driven rather than improvement-driven.

It is evident that national systems of quality assurance, as developed within United Kingdom higher education, have focused primarily on the principles of accountability rather than improvement. This has encouraged a compliance view of quality. It has also led to a preoccupation with the costs of quality systems rather than the benefits. Such an orientation has done little to promote the idea of quality management as an integral aspect of institutional self-regulation. Such neglect may well have serious repercussions for the ability of HE institutions to manage their affairs in a rapidly changing external environment.

Chapters IV and V of this report describe two contrasting models of quality management which have been developed within De Montfort University in response to major changes in its external environment.

The model described in *Chapter IV* of the report as *'audited self-evaluation within a devolved management structure'* was developed in response to conditions arising from the removal of the binary-line and the regulatory controls of the CNAA. Though the model has sought to reinforce the principles of self-regulation, consistent with institutional needs, the development and operation of the model has, in practice, been closely tied to the expectations of the external quality agencies, including, more latterly, the new Quality Assurance Agency. Given the degree to which national quality agencies continue to work within the cultural traditions of 'academic quality', this has represented a constraint on the development of a more

comprehensive, strategic approach to quality management. Such an approach, described in *Chapter V* of this report as *'strategic quality improvement through high-level process redesign'*, has been developed in response to the competitive 'market' pressures now facing the university and represents a more expansive approach to quality management to that currently being promulgated by external quality agencies.

Chapter III
Institutional context

1. Overview

De Montfort University was established in June 1992 from the former Leicester Polytechnic, itself created in 1969 from the amalgamation of Leicester College of Technology and Leicester College of Art. Following the 1989 Education Reform Act, Leicester Polytechnic, formerly under the control of the local education authority, become a fully autonomous Higher Education Corporation, with full responsibility for the management of its own financial affairs. As a result of the 1992 Further and Higher Education Act, the institution gained full university status, taking its name from Simon de Montfort, the presumed founder of the first English parliament in 1265.

The mission of the university, for most of the period examined as part of this case study, has been to 'provide teaching, research and complementary services delivered through a distributed university which is internationally competitive, locally sensitive and everywhere excellent'.

To achieve this mission, the university has sought to 'embrace a range of activities from sub-degree to post-doctoral levels within a context which values the personal and social development of all individuals'. The mission has also reflected aspirations of the university:

- to have sufficient size and influence to be a global force;
- to develop strong and binding relationships with the regional community;
- to ensure cost-effectiveness in the provision of educational services.

In 1969 Leicester Polytechnic had a student population of approximately 2,000 students. On gaining university status in 1992, this number had risen to 16,000 students. For the session 1997/98, 33,350 students were enrolled at the university, 81 per cent of whom were studying full time. The university now employs almost 4,200 staff, including 1,900 support staff, and has an annual expenditure of over £100 million. This pattern of growth has enabled the university to establish a reputation as one of the fastest-growing universities in Western Europe. A breakdown of current student and staff numbers within De Montfort University is presented in *Appendix 1* of this case study.

Rapid growth within the university has been achieved in the face of substantial reductions in real-term unit funding from government sources. During the period 1989-93, the unit of funding for the university was reduced by approximately 22 per cent; since then annual efficiency gains of between 3-6 per cent have been achieved. The university has maintained a balanced budget throughout this period, notwithstanding the legacy of a poor physical infrastructure inherited at the time of incorporation. This emphasis on financial probity has been a major factor in shaping the organizational structures and management philosophy of the university during the period under review.

The expansion of the university has been achieved partly through planned organic growth, but also through physical development and mergers with institutions beyond the original Leicester base. In 1991, the university opened a new purpose-built campus at Milton Keynes, 50 miles to the south of Leicester, the first greenfield site to be opened within the sector in 25 years. August 1994 saw the launch of De Montfort University, Lincoln (formerly Lincoln College of Art and Design and Lincoln College of Agriculture and Horticulture) and De Montfort University, Bedford (formerly Bedford College of Higher Education). One further merger, with the Charles Frears College of Nursing and Midwifery, was completed in August 1995.

Now located in four major centres (Leicester – two campuses; Milton Keynes – one campus; Lincolnshire – four campuses; Bedford – two campuses), the university has developed as an institution with a strong regional identity. In recognizing the rising demand from older learners, as well as the growing pressures for study opportunities closer to home, the university has developed an extensive 'franchizing' scheme which allows students to study the first or second years of degree/diploma programmes at local colleges, before completing their studies within one of the four principal DMU centres. In addition to its main distributed campuses, the university now has linked programmes with 22 colleges, registering a total of over 1,500 students.

Consistent with its mission statement, the university has sought to develop a wide spectrum of learning opportunities from further education courses to postgraduate degrees. It also offers research programmes across the spectrum of its academic disciplines, up to post-doctoral level. This policy of providing learning opportunities at different levels of study has been part of an overall strategy to develop a seamless route of learning and progression opportunities – a policy of 'vertical integration' within the curriculum.

The disciplinary range of the university is extensive, as reflected in the structure of academic departments (known as 'schools') which have existed for much of the period under review. These academic departments have included agriculture and horticulture; applied sciences; applied arts and design; arts and humanities; built environment; business; combined studies; computing and mathematical sciences; design and manufacture; engineering and manufacture; health and community studies; sport and education; law and social science. This spectrum of academic disciplines reflects the emphasis, though not exclusive focus, placed on 'vocational relevance' within the curriculum.

The university has been anxious to extend opportunities for study across this discipline range through the development of a university-wide modular

framework. This policy of promoting 'horizontal integration' within the curriculum is consistent with efforts to develop learning packages that enhance student choice. It is also consistent with a commitment to develop generic 'transferable' skills, as well as subject expertise, within the curriculum.

2. The structure and philosophy of devolved management within DMU

The organizational structure and management philosophy underpinning the development of the university for most of its short history, has been that responsibility for academic and resource decision-making should be devolved to academic departments and other 'cost centres' across the university, with the minimum of planning constraints.

Under the terms of governance, a Board of Governors has been responsible for the educational character and mission of the university and for overseeing its overall direction and performance. This responsibility has been discharged through a senior executive, comprising the vice-chancellor (chief executive), four pro-vice-chancellors and a small number of senior managers (e.g. finance director). Academic departments have been grouped into 'schools' (latterly faculties) and designated as cost (responsibility) centres. These have been configured to ensure academic coherence and a critical mass necessary to sustain a devolved budget. 'Service' departments (finance, student services etc.) have also been established as independent cost centres.

Committee structures have been configured to ensure that executive decision-making would be subject to scrutiny/comment by staff of the university, especially its academic faculty. Apart from the Board of Governors, the most senior of these committees has been the Academic Board, which has had responsibility for 'general issues relating to research,

scholarship, teaching and courses' and for advising on 'the development of the academic activities of the university and the resources needed to support them'. A large number of sub-committees have been established to support the work of the Academic Board.

Under the devolved management model, the Senior Executive has been responsible for setting the broad strategic objectives for the university, the terms and assumptions of which are shared with heads of schools and other cost centres. Schools have been expected to develop their own policies and plans to ensure responsiveness to local needs. These have then been refined, through an iterative process, to ensure consistency with university aspirations. The policies and plans of each school have been reviewed on an annual basis. Schools have also been subject to periodic internal audits to assess the effectiveness of self-regulation, within the terms of their devolved responsibilities.

Consistent with the philosophy of devolved management, each school has been required to balance its quality aspirations against a 'resource envelope' related to its overall performance, including its success in meeting income targets. A key institutional objective has been to bring each school to a point where its expenditure is broadly in line with its overall income, i.e. to reduce internal cross-subsidies between schools. This linkage between academic planning and financial responsibility was conceived as a key instrument in enabling the university to manage through a period of significant change, including the demands imposed by continued reductions in government funding.

Resource efficiency has, in general terms, been seen as a constraint, not an objective. By providing information on income and expenditure patterns within a school, it was hoped that staff would make informed decisions about the most effective use of scarce resources to achieve agreed objectives. Staff ownership for quality matters would thereby be enhanced and innovation/diversity encouraged.

The approach to devolved management was intended to facilitate growth and diversity, consistent with the strategic aspirations of the university. It was also designed to secure an educational provision that was cost-effective and fit for local purpose. This thinking spawned the development of an approach to quality management within the university, described within this case study as ***'audited self-evaluation within a devolved management structure'***. The essential features of this approach are conveyed in an extract from the quality policy statement that was developed to underpin the development of new quality systems within the university.

'Systems will be developed which devolve responsibility for defining, maintaining and enhancing the quality and standards of educational provision within planning and audit frameworks which ensure due responsiveness to the goals, capabilities and constraints of the university and the needs of its external stakeholders'.

The principles and practice underpinning this approach are described more fully in *Chapter IV* of this case study.

3. Re-engineering the university

The period 1992 to 1997 represented a period of dramatic change and not insignificant success for the university. There was, however, a growing recognition, towards the end of this period, that changes in the external environment would require a fundamental re-appraisal of the strategic objectives of the university and the means for achieving them. In particular, it had become evident that:

- greater efficiency gains would be necessary if the university was to respond successfully to the continuing decline in government funding;

- progressive reductions in the state funding for student tuition, allied to increased competition from new HE providers, would demand a more responsive approach to the needs of students and other external 'customers';
- changes in student profiles and shifts in patterns of student demand, would require a re-appraisal of the processes which support student learning and progression;
- developments in information technology had the potential to transform how work was undertaken within the university.

The university also faced internal pressures for change. In particular there was a growing awareness that:

- rapid institutional growth had been accompanied by changes to structures and systems which were largely incremental and often ad hoc;
- the mergers and partnership arrangements associated with establishing a 'distributed' university had resulted in an unacceptable level of diversity in how work was carried out in different parts of the university;
- the emphasis on devolved, 'cost centre' management had limited the capacity to plan and manage processes and systems across the different schools, departments and sites of the university;
- proposals to develop a university-wide modular curriculum would require a more consistent approach to the management of educational programmes across departmental boundaries;
- quality management should be extended into all aspects of institutional provision (thereby enabling the university to market and deliver a 'total learning package').

In response to these imperatives for change, the university commissioned a 'Review of University Processes' (RoUP). The RoUP project was conceived as a structured, high-level review of the nature of work undertaken within the university, how that work was undertaken and why. Based on the precepts of Business Process Re-Engineering, its primary purpose was to identify opportunities for the radical redesign of the core processes of the university in order to achieve step-change improvements in institutional performance. It was recognized from the outset of this exercise, that the review would have major implications for the organization and structure of the university as well as prevailing culture and practice. A long-term programme of high-level process improvement projects was envisaged for this purpose.

Alongside and informed by the RoUP project, the university undertook a major 'Review of Strategic Direction'. This review was to provide a new vision for the university, with a primary concern for the quality of the student experience, in all aspects of institutional provision. Within the terms of a revised mission statement – 'to strive for excellence in student learning, scholarship and research' – new strategic objectives were defined, to be achieved within a five-year period. The new strategic plan included a commitment to:

- provide a full range of learning experiences independent of time, location and mode of study;
- provide a flexible portfolio of learning routes though a new university-wide modular framework;
- facilitate a continuous curriculum for post-compulsory education;
- move from a distributed to an integrated university;
- provide a framework for quality assurance and enhancement in all areas of university activity;

- establish service standards and performance targets in all cost centres;
- enhance the research profile of the university.

Without a clear sense of direction, an organization cannot manage effectively or plan for quality improvement. All organizations require 'constancy of purpose' (Deming, 1986). This can only be achieved through a well-defined corporate strategy, based a sound understanding of customer needs.

Both the Review of University Processes and the Review of Strategic Direction started from this set of assumptions by asking fundamental questions as to why the university exists, for whom it exists and whether it is pursuing the right goals. Both projects have sought to redefine the relationships which should exist between the university and its key customers or stakeholders. These exercises have underpinned the development of a new approach to quality management within the university, defined here as ***'strategic quality improvement through high-level process redesign'***.

The principles and practice underpinning this approach are described more fully in *Chapter V* of this case study.

Chapter IV
Audited self-evaluation within a devolved management structure

1. Origins and guiding principles

During the academic session 1991/92, the De Montfort University (then Leicester Polytechnic) undertook a major review of its approach to quality assurance in the light of changing relationships with external quality agencies, the anticipated outcomes of the White Paper on Higher Education, and new organizational imperatives facing the institution. The review was undertaken by a working party of four staff, including the author of this case study who was seconded for the duration of the project. The review lasted approximately six months and involved a wide-ranging process of consultation before new systems were approved for implementation from the start of the session 1992/93 (see point 3 below).

The main purpose of the review was to develop a new institutional framework for defining, maintaining and enhancing the quality and standards of educational provision which was responsive to:

- the anticipated requirements of new external quality agencies;
- the goals, capabilities and constraints (resource and regulatory) of the university;
- the local needs of schools and departments within the university;
- the needs and expectations of students and other 'client' groups.

The working party established a number of guiding principles for the development of this framework, the first of which was that quality should be assessed by reference to 'fitness for purpose' – defined as 'the satisfaction of agreed stakeholder needs'. It was recognized that such a view of quality would require greater clarity in defining the objectives and standards for a quality service; improved consistency in the setting of quality objectives at all levels of the institution; provision for ensuring that quality objectives were understood and accepted by those affected by them and mechanisms for reconciling the potentially conflicting interests of different stakeholder groups.

The second principle for development was that the scope and boundaries of the quality framework should be clearly defined. In practice, this would mean identifying quality criteria and indicators for defined aspects of institutional provision. Mindful of the precepts of total quality management, the working party was keen to promote a more holistic view of quality within the institution. Such aspirations were, however, constrained by a prevailing orthodoxy that confined the terms of the debate to issues of 'academic' quality. Given the legacy of course approval and review developed under the auspices of the Council for National Academic Awards, this part of the review exercise was about continuity as well as change.

The third principle for development was that quality should be properly planned and managed. Quality assurance was, from this perspective, to be about preventing as well as detecting quality problems. Such an approach was consistent with a view of quality assurance as 'all those planned and systematic activities necessary to provide adequate confidence that given requirements for quality can be satisfied' (British Standards Institution, 1987).

The fourth principle for developing the new framework was that quality objectives and standards should be subject to an ongoing process of monitoring and evaluation in order to facilitate continuous quality

improvement. This was to be in contrast with custom and practice elsewhere within the sector, where monitoring and evaluation had traditionally been centred on annual or quinquennial review exercises. It was recognized that the development of performance review systems capable of ensuring continuous quality improvement would require:

- appropriate mechanisms for collecting and analyzing data on performance;
- the use of external and time-series data for 'benchmarking' purposes;
- a review process which would facilitate corrective action at relevant stages in the educational cycle;
- clear protocols for corrective action to maintain or enhance the quality of provision;
- arrangements for assessing the effectiveness of the improvement effort.

The fifth principle to guide the development of the new framework was that due consideration should be given to the costs of quality management. A key issue here was that the new systems should be simple, user-friendly and cost-effective.

The sixth principle for the development of a new quality model was that it should promote staff ownership and accountability for the quality and standards of educational provision within the university. Staff ownership for quality matters was to be reinforced via protocols designed to for promote self-evaluation and improvement. Such measures were intended to develop a more internalized approach to quality management. They were also conceived as part of a wider strategy for devolving more responsibilities to academic departments in the management of their own

affairs. The accountability dimension of the new quality model was to be promoted through planning and audit exercises aimed at ensuring that devolved responsibilities were exercised within a quality framework consistent with the overall objectives of the university and the needs and expectations of its client groups.

2. Principles into practice

Quality systems at the programme level

Roles and responsibilities

Consistent with the anticipated requirements of the national quality agencies proposed in the 1991 White Paper, the main focus of the new quality systems was to be centred at the programme (course) level. A key feature of this development was the designation of new responsibilities for the planning, management and review of programmes. The body with overall responsibility for undertaking these functions was the board of study, defined as 'a group of teaching staff, support staff and student representatives appointed to plan and manage a designated programme of study, who share the activities and responsibilities amongst themselves and who meet regularly while the programme is running to review, evaluate and improve it'. The 'executive' responsibilities associated with this work were to be undertaken by a smaller programme management team, which would in turn be led by a designated programme leader.

Planning and validation processes

Continuing with well-established traditions within the university, all new programmes of study were to pass through a planning process to ensure their cost-effectiveness and consistency with institutional/school objectives. All new programmes would also undergo a 'validation' process, involving internal and external representatives, to ensure that they satisfied stated design

requirements and threshold standards appropriate to the type and level of award. In essence, validation was about establishing confidence in programme aims and how they were to be realized. A comprehensive framework of quality criteria and indicators was developed to support this process. Validation was to result in the production of a 'definitive programme scheme' which would, in turn, form the 'learning agreement' between the university and its client groups and the basis for subsequent quality-control operations. Programmes of study would normally be given indefinite validation, though selective revalidation could be demanded where this was a formal requirement of a professional body or where a programme had undergone substantial changes and/or difficulties.

The core quality framework

Under a 'fitness for purpose' model, quality systems should be concerned with exploring the relationships between intentions and outcomes. Deficiencies in institutional quality systems may be explained, in part, by a failure to clarify the objectives and standards for an educational service. These should provide the *criteria* for quality assessment.

Within the DMU framework, institutional objectives were to provide the ultimate criteria against which performance would be assessed. It was recognized, however, that such objectives would need to be translated into terms which were operational at other levels of the organizational structure – school, department, programme, module, staff member etc. Institutional objectives would also need to be defined in ways which would be demonstrably relevant to the needs and expectations of external stakeholders.

To meet these requirements, a core quality framework was developed to facilitate an institution-wide engagement with issues pertaining to the quality and standards of educational provision. The framework was structured around four key aspects of programme provision: programme entry, programme management and resources, programme structure and delivery,

and programme outcomes. Under this schema, programmes of study were to be planned and reviewed against defined elements relating to each aspect of provision. These elements are illustrated in *Figure 1* below.

Figure 1. Core quality framework for programme planning and review

Programme entry	Programme management/ resources	Programme structure and delivery	Programme outcomes
• student target group • student access • marketing strategies • publicity and pre-entry guidance • enrolment process • student induction	• programme management team • student feedback mechanisms • employer liaison • multi-site operations • staff support • staff development • learning resources • physical resources	• programme content • programme structure • teaching and learning strategies • student guidance and support • assessment strategies	• progression rates • award success rates • student destinations

Each element of the core framework was to be addressed through reference to one or more quality criteria, each representing a generic quality standard derived from institutional policy and external stakeholder needs (including the assessment criteria of external quality agencies). Each quality criterion was, in turn, informed by a list of quality indicators which would allow the generic standard to be operationalized in ways which were appropriate to local circumstances and needs. Over 40 (generic) quality criteria and 300 (illustrative) quality indicators were identified as agreed elements of the core quality framework. As an illustrative example, the quality criterion and indicators for 'employer liaison' (as a sub-set of the core

provision, 'programme management and resources') are presented in *Figure 2* below.

Figure 2. Quality criterion and indicators for 'employer liaison' (Illustrative example from core quality framework)

Quality criterion [Generic standard]	**Quality indicators [deployed in relation to local needs]**
EMPLOYER LIAISON *Employers and their representative bodies have structured opportunities to provide feedback on programme operations*	• use of employer consultative/advisory committees • representation on internal committees • employer questionnaire surveys • links with representative organizations • feedback via student placements/staff secondments • feedback via part-time students/alumni • employer inputs to programme review process • teaching inputs from employers

The quality criteria and indicators were not conceived as final, definitive statements about the quality of educational programmes, but simply as starting points in an internal debate about the setting of explicit objectives and standards for a quality service within the university. Structured opportunities were provided for programme teams to provide feedback on the relevance and comprehensiveness of the quality criteria so that modifications could be made to the quality framework in the light of the issues raised.

The self-evaluation process

A significant feature of the new quality model was the decision to revise protocols for programme review with the aim of improving self-evaluation and providing opportunities for continuous improvement. In a conscious shift away from the traditional 'end-inspection' systems of annual or quinquennial review, programme teams were now asked to undertake a series of 'formative' reviews structured around the four core aspects of the quality framework illustrated in *Figure 1* above. The following review cycle was established for this purpose:

Term 1 Programme entry (new student cohort)
Programme outcomes (previous student cohort)

Term 2 Programme management and resources

Term 3 Programme structure and delivery

The sequencing of these reviews was designed to allow for issues to be addressed at appropriate phases of the academic cycle. Issues relating to student entry were, for example, to be reviewed in Term 1 (immediately following the admission of a new student cohort) thus allowing for changes in policy or practice to be implemented before the next student intake. Such an approach was consistent with a view of quality control as 'operational techniques and activities aimed at monitoring a process and eliminating causes of unsatisfactory performance at all relevant stages' (British Standards Institution, 1987).

Through an instrument known as the *Programme Log*, programme teams were to evaluate their performance against relevant quality criteria and indicators that informed each phase of the review cycle. Consistent with 'fitness for purpose' principles, it was intended that evaluation would

be, first and foremost, against the objectives and standards defined for each criterion/indicator within the 'definitive programme scheme'. Comparative or normative assessment would then be undertaken to assess current performance against past achievements (time-series analyses) or national trends (comparing the performance of programmes in cognate subject areas).

Within the DMU model, 'evaluation' was concerned with making judgements about quantitative and qualitative data collected from a 'monitoring' process. In providing evidence of quality standards, performance measurement was seen as an integral component of the self-evaluation system. It was expected that a wide range of internal and external monitoring information would be used to inform the evaluation process, including feedback from students, employers, and external examiners. Where appropriate 'statistical profiles' were included within the programme log to record quantitative data on performance against objectives/targets set for each of the quality criteria/indicators.

The outcomes of self-evaluation were to be recorded in the programme log, using a six-point rating scale:

5 Generally good with some outstanding features or many good features.

4 Some good features and no major shortcomings.

3 Sound, with no significant extremes, or good features balanced with shortcomings.

2 Some shortcomings in important areas.

1 Many shortcomings, generally poor.

x Criteria/indicators not applicable.

Such ratings were intended to facilitate collective judgements on the quality of existing provision and to help in determining priorities for quality improvement. Comments identifying points of good or bad practice were also to be recorded to support the numeric ratings.

In the DMU model, programme evaluation was to be viewed as an integral part of programme development; programme teams were therefore expected to identify measures necessary to maintain or enhance the quality and standards of educational provision. Such measures might include the setting of new performance objectives or revised arrangements for maintaining the current quality of provision. Within the programme log, improvement plans were expected to identify actions to be undertaken, designated responsibilities, time-scales and resource implications. This emphasis on action planning reflected the intended role of the programme log as an instrument for promoting self-evaluation and improvement.

From information collected as part of the cycle of formative reviews, programme teams were expected to complete a synoptic programme review summary (completed concurrently with the review of 'programme outcomes'). This was to provide an overall appraisal of the performance of the programme in relation to defined objectives and standards, confirmation of the ongoing relevance of the programme in relation to university/client needs and a summary record of actions taken/required in response to identified improvement needs.

In summary, quality systems at programme level were centred around a validation system aimed at ensuring the 'capability' of new programmes of study and a review system which would facilitate continuous quality improvement. A major innovation of the new systems was the programme log; an instrument designed to support self-monitoring and evaluation against a comprehensive range of quality criteria/indicators, relevant to both institutional and local needs. The programme log was also designed to promote programme development through the pursuit of focused quality

improvement strategies, which were planned and documented, using a review schedule that would facilitate corrective action at the appropriate phase of the academic cycle. A schematic overview of the system of programme review, based on the programme log, is given in *Appendix 2* of this case study.

Quality systems at school level

Context

Whilst recognizing the merits of a bottom-up approach to quality management, due consideration had to be given to the ways in which the quality-control activities of programme teams would be located within a wider range of responsibilities for managing quality within the university. In the development of quality systems at school level, efforts were made to develop a model which would facilitate top-down planning (school arrangements for planning, directing, resourcing and co-ordinating the quality-control activities of programme teams) and bottom-up feedback (review mechanisms to ensure that the needs of programme teams were appropriately addressed in the strategic development of the school and/or university).

Planning for quality

Within the parameters of overall policy objectives and plans set by the university, all schools were to have a high degree of delegated authority for the management of their academic and financial affairs. Responsibilities for defining, maintaining and enhancing the quality and standards of educational provision were central to this brief. Schools were expected to operationalize generic quality standards in ways which were relevant to their own local circumstances and needs. Thus, for example, whilst all schools were expected to satisfy the generic quality standard: 'students have structured opportunities to provide feedback on programme operations', the specific methods for obtaining student feedback were not prescribed.

Heads of schools and departments were to have a major responsibility for translating strategic objectives for quality improvement into operational practice. Heads of schools, as senior resource managers, were also expected to resource the work of quality improvement through appropriate provision for team meetings, staff development, training in quality control matters etc. They were also expected to ensure that programmes were designed and delivered within an acceptable 'resource envelope' and within parameters consistent with the policies and plans of the school. Heads of departments, as academic leaders, were expected to plan, direct and co-ordinate the work of programme teams, to identify priority areas for quality improvement and to support the setting of realistic performance standards/ targets for each programme. They were also required to endorse decisions taken by programme teams that would affect the overall design or delivery of the programme.

In support of these functions, each school was expected to appoint a quality assurance co-ordinator and a quality assurance group to advise on quality matters, to promote quality initiatives within the remit of the school and to liaise with other schools and departments on quality matters.

School review

Each school was given a key role to play in reviewing the outcomes of programme monitoring and evaluation. School review exercises were intended to reinforce the responsibilities of schools in maintaining and enhancing the quality of programmes within their administrative charge. They were also intended to ensure that the needs and concerns of programme teams were adequately addressed in the further development of the school and/or university.

In executing these responsibilities, schools were expected to carry out formative reviews following each phase of the programme review cycle, a standardized *pro forma* being used to record comments and actions in

response to issues raised within each programme log report. Each school was also expected to submit an annual school review summary appraising the operation of all programmes within its administrative charge. The purpose of this summative assessment was to consider the outcomes of programme monitoring and evaluation by looking at each programme, not just in its own terms (is it a good programme? can we improve it?), but in the wider context of school policy and plans (are there wider issues for programme/school development?). The impact of such deliberations on institutional policies and plans was also to be addressed at this level. It was anticipated that a structured framework for self-evaluation at programme and school levels would facilitate this feedback loop.

Quality systems at institutional level

Context

Under the devolved management model, the main focus for defining, maintaining and enhancing the quality and standards of educational programmes was to be located at the school level. Within this context, quality systems at an institutional level were intended to ensure that:

- new programmes of study satisfied quality criteria and threshold academic standards (programme validation);
- matters arising from the programme/school review process were adequately addressed in the development of institutional policy and plans (institutional review);
- devolved responsibilities for quality management were being appropriately exercised at school and programme levels (internal quality audits);
- the quality systems of the university were consistent with the evolving expectations of national agencies and other external stakeholders.

Roles and responsibilities

As part of the recommendations of the 1991 review exercise, a new Academic Quality and Standards Committee (AQSC) was established, with responsibility (delegated by the Academic Board) for maintaining and enhancing the quality and standards of educational programmes within the university. A new Quality Assurance Unit was also established to implement and further develop the quality systems proposed by the working party, consistent with evolving internal and external needs.

The involvement of the Senior Executive of the university in the new quality systems was to be focused around the processes of institutional planning, management and review. This would include responsibility for responding to issues arising from the annual review processes which legitimately fell beyond the authority or control of an individual school, the AQSC or the Quality Assurance Unit. Members of the Senior Executive were also to have a key role in a new system of school audits that were to be undertaken for each school on a triennial basis.

School audits

Given the high level of responsibility devolved to schools, it was expected that the number of issues requiring attention as part of the processes of institutional review would be much reduced. The main focus of interest at the institutional level was therefore to ensure that devolved responsibilities for quality management were being appropriately exercised at school and programme levels. This was to be achieved through a new system of internal quality audits.

School audits were intended to provide a systematic and independent examination of the objectives, systems and performance outcomes of schools within the university. Their purpose was to ensure that all schools were duly accountable to the university and its client groups for the provision of effective and efficient services within a framework that was complementary to and

supportive of self-evaluation and improvement. Put simply, school audits were intended to address the following questions.

- What is the school trying to achieve?
- How is the school seeking to achieve its objectives?
- Is the school successful in achieving its objectives?
- Can the school improve its performance?

School audits were structured to examine all aspects of service provision, including taught programmes of study, research, consultancy and other external services. They were also intended to address internal management issues including the marketing of school services, responsiveness to client needs, the deployment of human, learning and physical resources and the overall financial profile of the school. Whilst primarily concerned with the strategic direction and performance of the school as a whole, opportunities were afforded to discuss operational issues as well as pedagogic and subject-related matters. In order to inform the audit process, each school was to be invited to submit a self-evaluation report highlighting strengths and weaknesses in current performance and summarizing developmental needs and aspirations.

The audit was to be organized around a visit to the school, normally lasting not more than two days. The audit team would include senior management of the university, staff with quality-assurance responsibilities, staff from other schools and, where appropriate, external advisers. It was intended that the auditors would normally meet with heads of schools and departments, academic, technician and administrative staff, student representatives and nominated employers where appropriate. Audits would also provide the opportunity to inspect learning resources and the physical environment of the school.

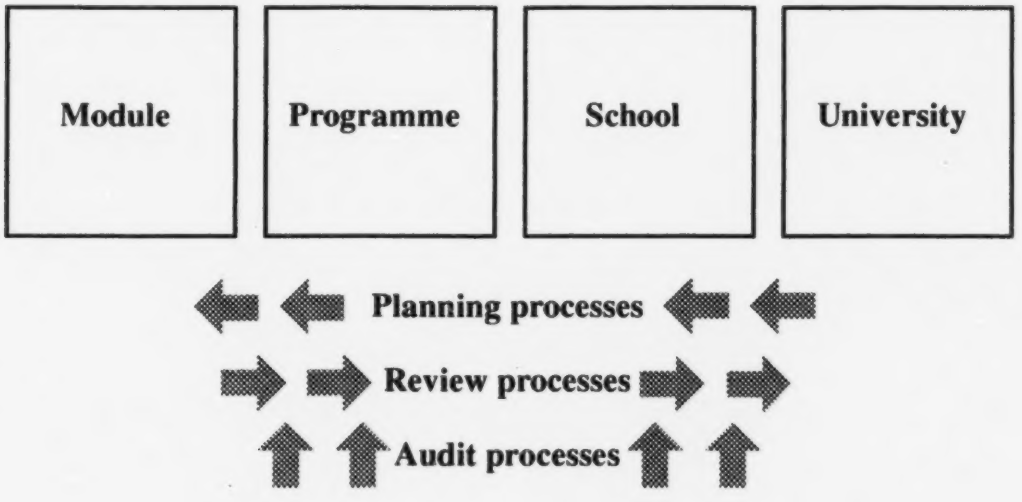
An audit report would be produced as an outcome of the visit for report to the Academic Board and the Governing Body of the university. The report

would include 'action plans', including time-scales for implementation, and arrangements for reviewing follow-up action by the school.

Overview of new quality systems

The university had sought to develop systems which would devolve responsibilities for defining, maintaining and enhancing the quality and standards of educational provision to those academic schools and departments directly responsible for the design and delivery of that provision. Such responsibilities were to be exercised within planning and audit frameworks aimed at ensuring due responsiveness to institutional goals and external stakeholder needs. Formal links were established between quality systems at institutional, school and programme levels for this purpose. The intended relationships between these parts of the quality system are illustrated in *Figure 3* below. The overall aim was to establish a system of self-regulation which would promote both ownership and accountability, in a cost-effective manner.

Figure 3. Overview of quality systems within a devolved management structure



3. Implementation and review of new systems

Consultation and implementation planning

It is taken as axiomatic in most writings on quality management that quality systems will only work by consent. In practical terms this means that staff at all levels should be involved in the development of new systems and see tangible benefits arising from them. This must hold true irrespective of any organizational imperatives for change.

The new systems developed by the university were founded on the culture and practice of programme and peer review inherited from the Council for National Academic Awards. As such they represented an approach based on continuity as well as change. They nevertheless demanded that school staff accept more explicit responsibilities for maintaining and enhancing the quality and standards of educational provision, consistent with intended moves towards a devolved management structure. They also imposed new requirements for internal accountability consistent with the changing goals and status of the new university.

Prior to the issue of the working party report in March 1992, consultative meetings were held with heads of school and departments and with members of the Academic Board. Copies of a consultative document were also made available for general reference within schools. Subsequent to the issue of the consultative document, presentations were made to programme leaders in all schools of the university. The briefings focused on the internal and external imperatives for change and the key principles underpinning the new systems. The operational implications of the new systems in terms of work to be undertaken, changes in roles and responsibilities and new reporting links, were also highlighted. Feedback from these sessions was broadly positive, though some staff remained sceptical as to the capacity of the new quality systems to facilitate a participative approach. The workload implications for staff were also a cause of some concern.

It was recognized from the outset that the implementation of the new systems would be an evolutionary process and would require measures to promote staff understanding and acceptance of the new arrangements, as well as changes in infrastructure support necessary to assist the processes of self-evaluation and internal audit. In the light of feedback from the consultation exercise, it was decided that the first phase of implementing the new model should be viewed as a learning exercise and that a review of the effectiveness of the new systems should be undertaken following the first year of operation. It was further agreed that staff and students should have structured opportunities to provide continuous feedback on the operation of the new systems. The Quality Assurance Unit was charged with ensuring that the new systems were appropriately supported and embedded at all levels of the organizational structure.

Feedback arising from the review process

From the information generated during the first year of operation, it was evident that staff responsible for implementing the new systems had approached their tasks with an open mind, the work of analysis and evaluation being undertaken in a thoughtful and generally self-critical manner. As tangible outcomes of the new systems, a wide range of improvement needs had been identified, with plans being identified for action at appropriate levels of organization.

By the end of the first year, an extensive range of feedback had been received from staff on the operation of the new systems. Much of this feedback was positive and focused on the strengths of the new model including:

- the use of a common framework for self-evaluation;
- the applicability of quality criteria and indicators across different disciplines/levels/modes of study;
- the ability to codify the outcomes of self-evaluation – instead of lengthy, unstructured annual reports;

- the use of a quality-rating scale to prioritize improvement needs;
- clearly defined protocols for recording and reporting on action plans;
- a review cycle which facilitated corrective action before the end-of-year review.

Notwithstanding these positive reports, it was evident from informal feedback that the 'winning of hearts and minds' was far from complete and that staff sensitivities remained on a number of important cultural, organizational and operational issues.

Cultural issues

It was recognized from the outset of this project that the identification of explicit criteria for quality would not be readily embraced by staff who subscribed to an intuitive, 'know it when you see it', view of quality. Demands for more explicit measures of quality reflect a legitimate desire for *evidence* of quality standards, in relation to specifically defined objectives for a quality service. Some staff nevertheless viewed this as a reductionist approach to quality.

Concerns were also voiced regarding the intended relationship between systems designed to promote both self-evaluation *and* accountability. Whilst the role of the programme log in promoting ongoing self-evaluation was generally welcomed, some staff feared that the reporting protocols necessarily associated with the use of this instrument would engender a 'compliance' culture (submitting reports by agreed deadlines) or a culture which would undermine critical self-scrutiny (fears regarding the possible misuse of self-critical reports within internal or external quality-audit exercises). Sensitivities regarding the use of numeric ratings in quality-assessment exercises compounded these concerns.

Finally, notwithstanding a commitment to make quality systems more responsive to the needs of students and other client groups, the new quality

framework remained firmly provider-centred. At an institutional level, service entitlements were not clearly defined and students had few opportunities to participate in the new quality systems other than through representation on committees. At a school level, some programme teams were developing innovative approaches to student feedback, but there appeared to be limited evidence of any sharing of best practice – an early indication of the internal competition engendered by the devolved structures (an issue addressed further in *Chapter V* of this report).

Organizational issues – roles and responsibilities

It was evident from the analysis of self-evaluation reports that many staff had failed to appreciate the responsibilities inherent in the new quality systems. Such responsibilities involved working within the constraints as well as the opportunities offered by a devolved management structure, including the limits imposed by a cash-limited budget. In many cases improvement plans continued to be used as 'shopping lists' of demands for extra resources or action by other schools/departments.

Legitimate concerns were voiced, however, at the delays in follow-up action on matters that did fall beyond the authority or control of individual programme teams. Whilst responsibilities and lines of communication were defined within the quality manuals, it was clear that some senior managers were unwilling or unable to take action on reported problems. It was recognized that this lack of internal accountability, if not addressed, would soon undermine staff confidence in the effectiveness of the new quality systems.

On further examination, these problems were attributable, in part, to the failure to reinforce the key role of the school in the new quality systems. Caution regarding the imposition of a prescriptive approach to quality management at the school level had resulted in a somewhat uneven development. The failure to integrate the processes of school planning and review was the most obvious manifestation of this problem. Some heads of

schools and departments appeared to be disengaged from the development and operation of the new systems. All schools had appointed quality-assurance co-ordinators, though not all had established quality-assurance groups. In all cases, terms of reference were variably defined, without good reason.

The variable development of quality systems at school level was starting to lead to an over-centralized approach, with programme log reports, in many instances, submitted direct to the Quality Assurance Unit for consideration, rather than filtered through review processes at school level. This was to have adverse consequences in undermining school ownership and placing unrealistic demands on the Quality Assurance Unit (over 200 programme log returns to be scrutinized, four times per year). Such *review* functions undermined the capacity of the Quality Assurance Unit to undertake selective *audits* of the effectiveness of the review processes.

Operational issues

Critical, if constructive, feedback was received on a number of operational problems associated with the new quality systems. A major problem here concerned the capacity of the information support systems to provide timely access to reliable performance data on a much wider range of quality indicators than had hitherto been the case, including those relating to resource management. The limited provision of IT facilities to support the processes of monitoring and evaluation was also a source of critical comment. The use of paper-based systems reinforced the 'bureaucratic' features of the model, that was at odds with the declared intention to make the new systems more cost-effective and user-friendly.

Finally, concerns were expressed at the costs of the new systems, particularly the opportunity costs associated with competing demands on staff time. Some staff saw enhanced programme management responsibilities not as an empowering device, but as an addition to already considerable

workloads. The perceived lack of tangible recognition and rewards for undertaking such responsibilities was one aspect of this problem. The problem also reflected a failure to justify 'quality' activities as an integral, properly resourced part of the management process. This, in turn, reinforced a disposition to view the new systems as part of an accountability deficit, rather than an intrinsic activity to be justified in cost-benefit terms. In short, the new systems were seen by some staff as quality assessment not quality work.

4. Developments arising from the review process

Despite reasonable initial success, it was recognized that further work was necessary to strengthen staff ownership of the new quality systems and to demonstrate the tangible benefits that could be gained from the successful implementation of these systems. In response to issues identified during the review process, a number of key changes were made for the second phase of implementation. These are summarized below.

Refinements at the programme level

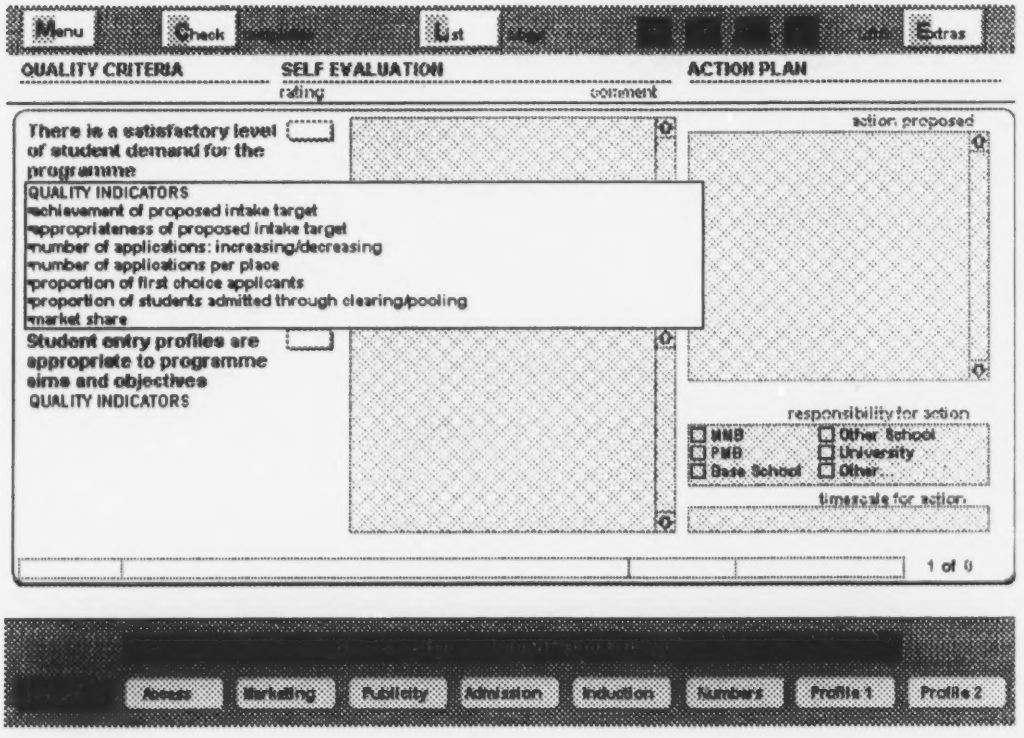
Changes at the programme level were focused on reinforcing the role of the programme log as a self-evaluation instrument aimed at addressing questions which were intrinsic to programme quality. This was to counter the idea that the log was primarily an instrument for internal accountability. This shift of focus was to be achieved by:

- a staff development exercise aimed at clarifying the scope and purpose of the new quality system;
- promoting self-evaluation as an integral aspect of programme management, not an adjunct to it;
- encouraging programme teams to identify 'focus topics' directly relevant to their own needs and priorities;

- revising the review cycle to reduce the demands on staff (to be undertaken twice not three times yearly);
- enhancing IT facilities to make the new systems more user-friendly.

In support of the last objective, an Electronic Programme Log was developed using in-house software, based on a proprietary database management system. The new software made it possible to carry out self-evaluation exercises using a simple, standardized format, an illustrative example of which is presented in *Figure 4* below.

Figure 4. Illustrative example of self-evaluation report using in-house software



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The use of IT enhancements made it possible to develop the programme log as an 'expert' system to support self-evaluation in an integrated, cost-effective manner – a conscious shift away from the unstructured, paper-based, review systems which still prevail within the sector. The system was designed to be more user-friendly – a major consideration in terms of the competing demands on staff time. Help screens were made available to support staff in the evaluation process. These provided access to policy statements from definitive programme records and further guidance on the full range of quality indicators. Programme teams were also provided with on-screen access to core statistical information provided from central databases, including time-series and national data for benchmarking purposes. In addition to numeric ratings of performance, supporting textual comments and action plans could be recorded, in a synoptic or extended form, as appropriate.

Refinements at the school level

A major issue arising from the review exercise was the need to strengthen the role of schools within the quality system, consistent with their responsibilities within the devolved structure. This was to be achieved by:

- reinforcing the responsibilities of the school in acting on the outcomes of programme review;
- reaffirming the intended links between the processes of school planning and review;
- restating the role of school heads in planning, directing and resourcing the activities of programme teams;
- establishing standard terms of reference for school quality assurance co-ordinators and groups.

All of these measures were an attempt to put a limit on the diversity that could exist in the development of school quality systems, within the terms of the devolved management structure.

Refinements at the institutional level

The review exercise concluded that reporting relationships between school and institutional levels required firmer definition. This was to be achieved by enhancing protocols for responding to problems which fell beyond the authority of the school, together with closer monitoring of follow-up action taken in response to issues raised. The review exercise also concluded that measures should be introduced to promote a more client-centred approach to quality management. Two major initiatives were proposed for this purpose, namely the introduction of institutional student satisfaction surveys and the development of a student charter.

During the 1994/95 session, the university undertook the first of a series of institutional questionnaire surveys aimed at building up a more comprehensive picture of student needs, expectations and satisfaction levels across a wide range of institutional services, including those offered at programme level. Three separate questionnaires were developed for this purpose to reflect the needs and judgements of incoming, continuing and exiting students. Taken together the three questionnaires represented a full census survey of all DMU students. Though primarily intended for management information purposes, the results of the surveys were widely published to inform self-evaluation exercises at the programme and school levels. They were also used to support the development of new systems of internal audit, including exercises aimed at comparing feedback from staff, students and other sources (see below).

Systems for improving responsiveness to client needs were further supported through the publication of a University Charter. The Charter, issued

during the session 1994/95, outlined a range of service entitlements that students, employers and the general public could expect from the university. It also identified mechanisms for providing feedback (including complaints) on service performance. It was intended that feedback from client groups on service standards defined within the Charter should support and complement other systems for performance monitoring and evaluation within the university. The use of the core quality framework in developing statements of service entitlements was intended to support this objective.

The final change in the further development of quality systems at the institutional level was to strengthen internal accountability through a system of continuous, thematic audits on selective aspects of institutional provision. Such audits were intended to complement the system of triennial school audits in assessing the effectiveness of self evaluation at module, programme or school levels, including validity of self-assessment ratings within the programme log. Such audits were to be supported through the facility to compare or 'triangulate' data from different sources, using criteria and indicators from the core quality framework. Thus data obtained from the student satisfaction surveys could be analyzed to compare student perceptions on specified aspects of educational provision against the self-evaluation ratings produced by programme teams. A specimen example of such a triangulation exercise is presented in *Appendix 3*.

The periodic examination of specified performance data on programme operations across the university was to provide another important focus for audit activity. For example, an audit group established to examine student progression rates within the university approached this task by:

- establishing threshold benchmark standards for student progression for each level of study;
- identifying programmes falling beneath these benchmarks;

- examining how an apparent problem had been addressed in the self-evaluation reports of programme teams.

The outcomes of this process are presented in *Figure 5* below.

Figure 5. Case study in audited self-evaluation (Student progression rates)

Programme team self-evaluation	Audit team response
• Acceptable explanation for low progression rates	No further action
• Problem acknowledged – action plan agreed	Monitor outcomes of action plan
• Problem not acknowledged	Reinforce principles of self-evaluation; agree/monitor action plan

Other selective audit exercises have been undertaken using reports from external examiners on individual programmes that are submitted to the university, on an annual basis. In the normal course of events, such reports are used to support the processes of self-monitoring and evaluation at the programme level, with the expectation that identified problems will be properly addressed at this level or referred to other parties for action. As a further check on the effectiveness of this self-evaluation process, audit exercises could now be undertaken to examine the degree to which external examiner feedback was informing the processes of self-evaluation and the adequacy of team responses to the issues raised. Developments in software support for self-evaluation and internal audit enabled significant advances to be made in improving the effectiveness and efficiency of these triangulation exercises.

5. Critical evaluation of the strengths and limitations of the model

The quality systems identified within this section of the case study have now been in operation for a seven-year period. They have attracted significant interest within the United Kingdom and overseas and been commended by external quality agencies. At the main institutional audit of the university in 1995, the Higher Education Quality Council commended the university for the operation and effectiveness of the Quality Assurance Unit; the general effectiveness of the programme log system and its widespread acceptance by staff; the development and implementation of school audits as a means of ensuring, on a periodic basis, the satisfactory performance of schools; and the introduction of university-wide student feedback questionnaires.

Notwithstanding ongoing refinements and changes to meet the evolving requirements of a university-wide modular curriculum, the essential principles underpinning the model of 'audited self-evaluation' have remained unchanged. An assessment of the distinctive strengths of this model and its limitations (which are characteristic of most quality systems in higher education) is given below.

Strengths of the model

- Structured 'smart' systems for self-evaluation and improvement at programme and school levels, using quantitative and qualitative data from internal and external sources.
- The embedding of self-evaluation within a review schedule that facilitates continuous quality improvement, with feedback links into the planning cycle.
- Systems of internal quality audit aimed at assessing the effectiveness of the self-evaluation process, at appropriate levels within the organizational structure.

- A core framework of quality criteria and indicators linked to institutional policy and external stakeholder needs, which provides a common structure for self-evaluation and internal audit.
- Measures to promote a more client-centred view of quality, including the introduction of institution-wide student satisfaction surveys.
- The in-house development of proprietary software to support the processes of self-evaluation and internal audit in a cost-effective manner – including the ability to 'triangulate' performance data from different sources.
- Protocols designed to promote ownership and accountability within the quality systems.

Limitations of the model

- Fitness for purpose has still to be established through reference to objectives and standards for a quality service, which are attainable *across* the university. This is, to a large degree, a consequence of a devolved management model that focuses on the needs and performance achievements of individual departments rather than those of the university as a whole. Under such an approach, measures to operationalize generic quality standards, consistent with the needs of a student charter, become highly problematic.
- Further work needs to be undertaken to confirm the appropriateness of objectives and standards for a quality service (i.e. the assessment of fitness *of* purpose). Facilities within the model for 'benchmarking' provision and performance against those of other cognate institutions have been used to only limited effect.
- The model lacks a strategic, long-term focus. The encouragement of quality initiatives at a local level has resulted in changes that

have been large in number but small in scale and often piecemeal in nature. The devolved model can be said to have resulted in a form of 'unplanned incrementalism' that has restricted the capacity to promote long-term, institutional change.

- Consistent with the expectations of external quality agencies, the model has continued to focus on issues of 'academic quality' – centred on the quality and standards of educational programmes and the activities of academic departments. This has restricted the capacity to locate quality within an institutional context and deflected attention from the crucial interdependencies that exist between activities undertaken in all parts of the institution.
- Notwithstanding measures to promote a more client-centred view of quality, the model has remained focused on the needs and expectations of the service providers and external regulators, rather than those of students and other users of the service.
- Despite linkages to institutional policy and plans (via the core quality framework), the quality systems have been ultimately driven by the expectations of external quality agencies rather than the internal needs of the university. The model has also retained an accountability focus that, in part, explains the difficulties of generating a culture of self-evaluation and improvement.
- The processes of quality planning and review have still to be fully integrated at different levels of the organizational structure. Formal approaches to quality planning, including the setting of specific, measurable objectives for quality improvement, remain limited; outcomes from the review processes are still not always addressed within the terms of the planning/budget cycle. Incentives for quality improvement remain limited.
- Notwithstanding assertions that quality cannot be inspected into products or services, the model (like most other quality models

within the sector) remains centred around the detection rather than the prevention of quality problems. The capability of internal processes and systems in 'assuring' required standards of performance has not been thoroughly examined, particularly where such processes cross departmental boundaries.

- The lack of an integrated information system, capable of providing timely access to reliable performance data, has created frustrations amongst staff and resulted in unnecessary workloads. This problem was, again, a consequence of a devolved management structure which encouraged the development of multiple student data systems, most of which were not fully interactive.
- The model has still to be properly assessed in cost-benefit terms. Quality improvements have been largely incremental in nature and difficult to aggregate in terms of total benefit to the university. The costs of the system have also been difficult to quantify since staff activities in this area have invariably been viewed as a 'free' resource. Of no less significance has been the failure to assess the costs of quality mismanagement, including the costs of fragmented processes and systems resulting from the devolved management system (e.g. duplication of effort, internal competition and the limited sharing of best practice).

All of these issues represent imperatives for change and provide the rationale for the development of a model of quality management described within this case study as *'strategic quality improvement through high-level process redesign'*.

Chapter V
Strategic quality improvement through high-level process redesign

1. Business process re-engineering

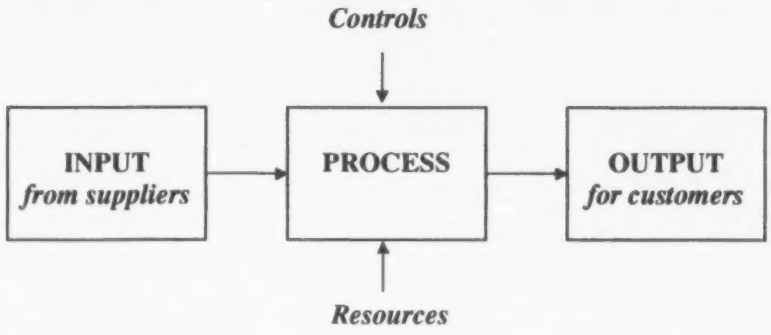
In recent literature on the management of change, few subjects have excited as much interest as Business Process Re-engineering (BPR). Although BPR offers no prescriptive methodology for change, its central concern is with the radical redesign of organizational processes, in order to achieve step-change improvements in institutional performance.

"Re-engineering is the fundamental rethinking and radical design of business processes to achieve dramatic improvements in critical, contemporary measures of performance, such as cost, quality, service and speed." (Hammer and Champy, 1993).

"BPR is an improvement philosophy. It aims to achieve step improvements in performance by redesigning the processes through which an organization operates, maximizing their value-added content and minimizing everything else. This approach can be applied at an individual process level or to the whole organization." (Peppard and Rowland, 1995).

Within the lexicon of BPR, a process may be defined as an activity, or series of activities, that convert inputs into outputs by doing work. Processes give purpose to activities. They use resources and controls to add value to inputs (from suppliers) to produce outputs (for customers). All work is process and there is no product or service without a process. These simple, defining characteristics of a process are illustrated in *Figure 6* below.

Figure 6. Diagrammatic representation of a process



Processes can be examined at different levels of analysis. For example, at the highest level of analysis the work of a university may be considered as an educational process, to 'provide education'. This process can be broken down into a number of high-level processes: recruit students, undertake research etc. The high-level process, to 'recruit students' can be disaggregated into various sub-processes: attract applicant, process student application, etc. The sub-process to 'process student application' can then be decomposed into more detailed activities: to 'assess application', 'make offer' etc. Such activities can, in turn, be broken down into more detailed tasks.

The notion of a *process hierarchy* is central to any understanding of the principles of business process re-engineering (see *Appendix 4*). It also helps to distinguish BPR from other forms of process improvement. In 'continuous improvement' methodologies, processes are examined in considerable detail but at a low level of analysis (i.e. the detailed breakdown of activities and tasks). In BPR, processes are examined at a high level of analysis but at a low level of detail. In general terms, the higher the level of process analysis, the greater the scope for organizational change and improvement. Conversely, the lower the level of process analysis, the easier to implement organizational change.

To realize the potential for change offered by BPR, it is necessary to understand the relationships that exist between processes, systems and functions. Whilst *processes* describe the ordering of activities/tasks undertaken; *systems* are the controls that are applied to a process to ensure that it is operating efficiently and effectively. *Functions* define the organization of activities around given areas of knowledge and expertise, e.g. finance, estates, marketing etc.

Commonly observed features of processes in most organizations may be summarized as follows.

- Over 80 per cent of processes are repetitive and can, therefore, be managed.
- Most organizations are organized by function/department rather than process.
- Most processes are developed incrementally in response to functional or departmental needs.
- Functions and departments often optimize their part of the process at the expense of the entire process.
- Processes involve many hand-overs between persons/departments during which things can go wrong.
- Customer needs invariably cross departmental boundaries.
- Few people understand how their particular actions impact on other parts of the process.
- There is invariably no one to own or optimize the entire process.
- Process performance is rarely adequately or appropriately measured.

In order to address these well-documented features of organizational life, BPR involves examining and, where appropriate, redesigning, processes across departmental boundaries, with the aim of improving responsiveness to the needs of (internal or external) customers. BPR is not constrained by organizational structures; rather it is a central tenet of BPR that systems and structures, including roles and responsibilities, should reflect the needs of processes and not vice versa. A vision of organizational change based around high-level process redesign, might be represented as follows:

- processes are aligned with strategic objectives/customer needs;
- work units change from functional departments to process/ customer-focused teams;
- organization presents a single, unified point of contact to external customers;
- employees become customer-focused and empowered to make their own decisions;
- teamwork ethic replaces traditional management functions and reporting lines;
- process owner/teams are appointed with a collective responsibility for process results;
- jobs change from single task to multi-dimensional work;
- information services are based on empowerment not control.

BPR offers a structured approach to process improvement aimed at transformational change. Unlike models based on continuous process improvement, which involve small-scale changes to activities and tasks at a local level (often without reference to their impact on other parts of the organization), BPR is concerned with the analysis and redesign of whole institutional processes.

Developments in information technology offer major opportunities for redesigning institutional processes. All processes are based on communication and information-handling systems; indeed IT systems only exist to support the processes of an organization. Yet too often IT systems are developed in ways which duplicate or modify existing processes. In contrast, BPR seeks to use the potential of information technology to create new ways of working (rather than making old processes work faster). Relational databases and communications technologies enable information to be shared instantly and continuously updated. This means that key processes can be designed to work simultaneously at any location, rather than sequentially in different functional departments. This, in turn, means that organizations can combine the advantages of centralized and decentralized operations.

BPR is strategic in concept. The 'vision' for BPR must be consistent with the mission of the organization and based on clear objectives for process improvement. BPR requires strong leadership and the full commitment of senior managers within the organization. Although BPR is intended to be radical and interventionist in nature, it presupposes a bottom-up implementation of redesign proposals and a cycle of continuous process improvement until the need for further intervention is identified. BPR, therefore, requires not only effective consultation but also the active participation of staff in implementing the detailed 'low-level' changes to processes brought about by 'high-level' process redesign. It also requires that clear lines of responsibility and accountability be identified for the operation and development of the new processes. Whilst high-level process redesign is likely to have radical implications for organizational development, changes may need to be implemented in measured steps. BPR takes time – it is not a quick fix.

BPR is usually undertaken when there is a recognition that incremental change is no longer sufficient to achieve corporate objectives and that a more radical rethink is necessary as to the nature of work undertaken within

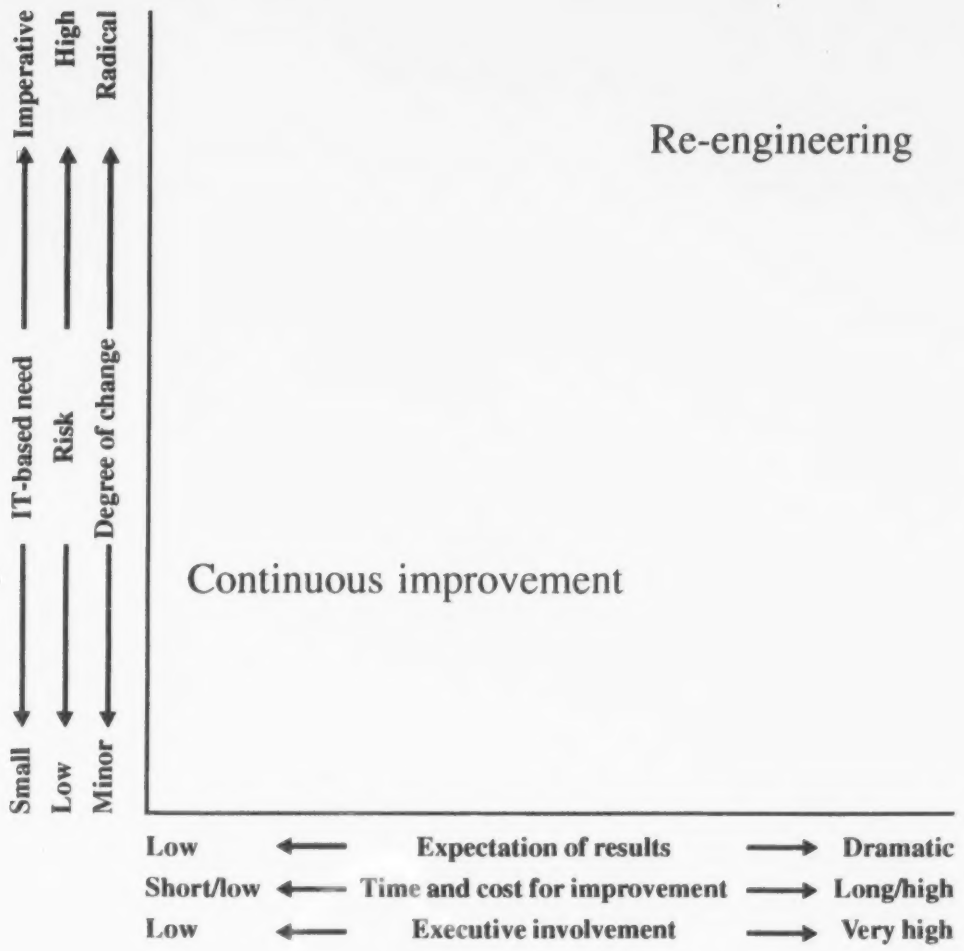
the organization, how that work is undertaken and, above all, why. This is ultimately the equivalent of going back to a blank sheet of paper and asking the question: *if we did not have a university, how would we invent one?*

Whilst business process re-engineering has no set 'theory' or methodology, it has a number of defining characteristics which distinguish it from other forms of quality improvement. In summary, BPR:

- is strategic in concept;
- is customer-driven;
- focuses on core institutional processes;
- involves process redesign across functional boundaries;
- uses advances in information technology:
- sets 'stretch' improvement goals;
- requires strong leadership;
- takes time – it is not a quick fix.

These distinctive features of BPR, and their relationship to models of organizational change based on continuous process improvement, are illustrated in ***Figure 7*** below.

Figure 7. Process improvement: re-engineering or continuous improvement?



2. Review of university processes

Notwithstanding continued refinements over a seven-year period, the model of audited self-evaluation, outlined in *Chapter IV* of this report, has achieved only modest success in achieving anticipated improvements in institutional performance, though it has satisfied the accountability requirements of external quality agencies. Since it is arguable that the existence of such agencies provides the *raison d'être* for quality systems in most higher education institutions, this need not, in itself, have been seen as a problem. It did, however, raise doubts about the capacity of the model to promote the type and scale of change required by the university as it approaches the new millennium.

In response to growing internal and external pressures for change (see *Chapter III, point 3*), the university commissioned, towards the end of 1996, a Review of University Processes (RoUP): a structured, high-level review of how work is organized within DMU and how it might be changed. The prime purpose of the RoUP study was to identify opportunities for the redesign of institutional processes in order to achieve improvements in quality of service, cost-effectiveness, student satisfaction and staff morale. More generally, it was hoped that the review would, over time, support the strategic redirection of the university and demonstrate the benefits of adopting a more process-orientated approach to the organization of work within the university.

The RoUP initiative was based on a very different perspective of quality management and quality improvement to that described in *Chapter IV* of this case study. Building on the principles and methodologies of Business Process Re-engineering (BPR) and Total Quality Management (TQM), the RoUP exercise has sought to:

- focus on the planning and performance of institutional processes rather than functional or 'discipline' units (recognizing that such

units may optimize their own performance at the expense of the overall process);

- assess the quality and financial 'costs' associated with the failure to plan, manage and integrate processes across the various departments and sites of the university;
- draw a critical distinction (with far-reaching implications for traditional delineations of 'academic quality') between those processes which are student-facing (core processes) and those which are not (support or compliance processes);
- achieve step-change improvements in institutional performance through a fundamental re-appraisal/redesign of the core processes of the university, consistent with institutional goals and client needs.

Through alignment with the Review of Strategic Direction (see *Chapter III, point 3*), the RoUP project has been strategically focused around the goals, capabilities and constraints of the university. It is based on a customer-orientated approach to quality management that is orientated towards service as well as 'product' quality. It is predicated on the assumption that quality must be designed into processes (a focus on quality assurance rather than quality control). It recognizes the costs of embarking on quality-improvement programmes and the costs of not doing so. Finally, it is aimed at achieving 'stretch' improvement goals rather than small-scale, incremental improvements in performance. This involves asking the question 'are there new ways of doing things?' instead of just 'can we do things better?' From a 'quality' perspective, the author has termed this approach '***strategic quality improvement through high-level process redesign***'.

3. Scoping university processes

As a first step in the RoUP project, a 'scoping study' was undertaken in order to determine those processes which had maximum potential for improving institutional performance and which were critical to the continued success of the university. For this purpose, the scoping study sought to:

- define the core and support processes of the university;
- analyze the current operation of those processes;
- establish key principles and recommendations for process redesign;
- develop an overarching plan for process improvement within the university.

A number of critical success factors were identified for evaluating the outcomes of the scoping study, including the expectation that improvement options would be generated which would support the delivery of the university strategy, enhance quality, increase customer focus, improve staff morale, eliminate non-value-added activity, reduce costs (or increase revenue) and increase corporate flexibility.

The initial work of the scoping study was centred on defining the *core processes* of the university. Within the terms of BPR, core processes are defined as those high-level processes that are customer facing, strategically important to the organization and cross-functional boundaries. By their very nature they consume a large resource and so offer the best potential for yielding significant improvements in institutional performance. Within the university, six processes were initially found to meet these criteria. These processes were identified as:

- developing learning routes (i.e. programmes, modules etc.);
- recruiting students;

- facilitating student learning and progression;
- providing welfare and recreational services;
- undertaking research;
- providing consultancy services.

It was decided that the scoping study would focus primarily on the first four of these processes and that the activities associated with research and consultancy would be considered only insofar as they impinged on the other core processes. Six *support processes* were also identified for examination in terms of their impact on the operation of the core processes. These support processes were identified as:

- managing staff;
- managing information;
- managing finance;
- managing physical resources;
- managing quality;
- making policies and plans.

A project team, led by the author of this case study, was established to plan and undertake the work associated with the analysis and review of these high-level processes, with advice from external consultants. A steering group was also appointed to oversee and monitor the progress of this work.

In order to understand the current operation of the core processes selected for review, and in generating options for process improvement, the project team sought information from a wide spectrum of staff and students, via one-to-one interviews, group discussions and workshops. A comprehensive range of documentary evidence, including available

performance metrics, was collected to support this exercise. A process mapping technique known as IDEF0 (Integrated Definition Method) was used to classify and evaluate this information. This technique is recognized to be particularly useful in defining the high-level processes of an organization and enabling these processes to be broken down into lower levels of analysis. This capacity to build up a picture of a process hierarchy within an organization is illustrated in *Appendix 4* of this case study (see also *Chapter V, point 2* above).

In analyzing and process mapping the core processes identified as part of the scoping study, the project team sought answers to a range of structured questions.

What work is done? How is it done? How well is it done? Why is it done? Who does it? Where is it done? Who are the customers of the process? Who are the suppliers?

As part of the structured methodology for identifying redesign opportunities, the project team sought to:

- question why work was undertaken;
- challenge existing authority;
- think outside of existing functional boundaries;
- challenge false assumptions;
- strive beyond existing best practice.

4. Issues arising from the analysis of existing processes

In De Montfort University, as in most (if not all) universities, activities have traditionally been organized by reference to functional, departmental and site interests rather than process needs. As elsewhere within the sector, much of the work undertaken within the university has also been predicated on a distinction between academic and non-academic work. It was evident to the project team, from the start of the scoping study, that such features of organizational life would not be conducive to effective or efficient process management, nor to a customer-focused approach to the delivery of educational services. The project team also appreciated that whilst the scoping study was primarily focused on the analysis and redesign of institutional *processes,* this would necessarily impact on the *organization and structure* of the university, the *systems* underpinning that organization and the prevailing *culture* within which students and staff were required to work. These considerations set the parameters for the analysis of existing processes and the framework for exploring redesign opportunities.

Process issues

The findings of the analysis phase of the scoping study confirmed the fragmentation that existed within and between the core and support processes of the university. The following issues were particularly significant.

- All processes appeared to lack a strategic focus. There were few examples of attempts to plan for an entire process; indeed devolved management structures effectively prevented this.
- The case for diversifying processes to meet the needs of particular departments, sites and client groups was frequently made but not always proven. Many processes appeared to have developed on an ad hoc, incremental basis, often in response to parochial interests. There was limited evidence of *rational* diversity.

- Each process was typically conceived as a series of discreet stages, the purpose of which was problematic in relation to the entire process. Processes were often 'events-driven' or viewed as 'hurdle-jumping' exercises rather than continuous, iterative processes (e.g. student induction was typically viewed as a one-five-day event rather than an extended process of preparing students for higher education).
- Each process was characterized by 'end loading', i.e. by a heavy staff/resource investment at the end of the process rather than at the start (e.g. the primacy of summative over diagnostic methods of student assessment).
- The crucial linkages between the core processes were rarely understood or addressed. This was a major factor in fragmenting the services provided to students (e.g. the failure to integrate provision for the academic and personal counselling of students).

The analysis phase of the project also raised fundamental doubts concerning the 'added-value' of some processes. Many processes were seen as having a compliance function, resulting from external requirements, with little benefit to the university. Some processes appeared to represent form over substance. Few processes were analyzed in input/output terms or in terms of cost/benefit. As in most organizations, costing models had been set up to record the costs of functions (departments) not processes. Many key activities were being undertaken by academic staff as a 'part-time' job, or as a 'free' resource.

Structural issues

It was evident during the early stages of the scoping study that process fragmentation was, in large part, a consequence of the organization and structure of the university. Specifically, the following issues emerged.

- The philosophy of devolved management had resulted in a 'minimalist' approach to institutional policy and planning which has limited the capacity to plan and manage processes across the various schools, departments and sites of the university. It has also resulted in a lack of institutional protocols for managing all aspects of the student experience and for facilitating the development of a university-wide modular framework.
- Roles and responsibilities were defined in relation to functional rather than process needs. A wide range of departments were associated with each process – all with a lack of authority/ understanding/control over the total process. This had resulted in a lack of process ownership and, at times, a scapegoating culture.
- The effectiveness and efficiency of the processes were compromised by internal competition between and within schools (e.g. competition within the process of recruiting students). Such competition inhibited the sharing of resources and the dissemination of best practice.
- Devolved responsibilities to schools had compromised the status of the student relationship with the university per se. In particular, it had limited the ability to deliver threshold service standards across the distributed university, as envisaged within the University Charter. The emphasis on an 'academic' culture within schools had led to the marginalization of other aspects of the student experience (e.g. welfare and recreation).
- Devolved responsibilities had resulted in uneven systems' development within the university. Thus, for example, in the absence of any overall strategy for developing information systems within the institution, individual schools had developed their own student data systems, many of which were not interactive. This had inhibited the tracking of student performance and restricted

access to student data for decision-making purposes. (The subsequent development of a new student data system, based on a single data-set, was to open up major opportunities for process redesign, as noted in *Chapter V, point 6* of this report).

Cultural issues

Much of the work undertaken within higher education institutions (and the structures and systems which underpin this work) is based on a distinction between 'academic' and 'non-academic' activities. As discussed in earlier sections of this case study, most approaches to quality management within higher education have been predicated on the assumptions of an 'academic quality' model. Within DMU itself, systems for managing information and managing staff had also been developed on the assumption that it is possible and necessary to differentiate between academic and non-academic needs. During the course of the scoping study, it became apparent that such distinctions were of doubtful value in addressing the needs of the core and support processes under review. They were also less than helpful in defining the roles and responsibilities of staff to meet process requirements.

The scoping study identified many roles which were undertaken by 'academic' staff in relation to a range of activities, e.g. researcher/scholar, teacher, manager of learning, counsellor, administrator, student assessor, author of learning material, technologist, consultant, resource manager, staff developer, marketer, etc. The cultural assumptions about the expertise of 'academics' in relation to each of these roles were, however, from a process perspective, highly problematic. Thus, for example:

- What constitutes an 'academic' activity in relation to a recruitment process?
- What are the capabilities of academics in managing the switch from teaching to learning?

- How are 'non-academic' roles defined in relation to the needs of an educational process?

The challenge to cultural assumptions drawn out by these questions was also evident in examining the status of activities within the processes under review. Re-engineering seeks to distinguish between core processes, support (or enabling) processes and compliance processes. 'Recruiting students' is a *core* process by virtue of the fact that it is a customer-facing process and strategically important to the university. It is, in other words, intrinsic to the work of a university. Yet for many staff within the higher education field, student recruitment is marginalized as an 'administrative' process. This has implications for the status of activities within this process and for the rewards that relate to the work undertaken. It also raises fundamental questions as to the ways in which resources are allocated to the core processes of a university.

Perhaps the most acute cultural issue raised as part of the analysis phase of the scoping study was the degree to which the processes, as currently operated, invariably reflected the needs of the service providers rather than the service users. The development of a model of service quality presupposes that staff, including senior managers, view higher education as a service – many do not and this is clearly the size of the cultural challenge to process improvement within higher education.

In summary, the analysis phase of the scoping study demonstrated that the fragmentation of processes, structures and systems within the university had major implications for the efficiency and economy of work undertaken and for the quality of services provided to students. It also helped to explain the duplication and bottlenecks that are an acknowledged feature of life in most universities and a cause of much frustration for staff and students. This analysis was to provide a powerful rationale for the principles and recommendations for process redesign, as described in the following section of this report.

5. Principles and recommendations for process redesign

Consistent with the agreed objectives for this exercise, the scoping study identified a number of high-level principles to inform the redesign of all processes within the university. Seven overarching principles were established for this purpose, as set out below.

- All processes should be strategically driven and linked to the goals, capabilities and constraints of the university.
- All processes should be continuous, developmental and integrated.
- Organizational structures should reflect the needs of the processes, not drive them.
- The processes should be student (customer) focused.
- The support processes should facilitate the operation of the core processes.
- Metrics should be available to assess the cost-effectiveness and quality of the processes.
- The processes should be responsive to, but not driven by, external 'compliance' requirements.

These principles underpinned a more detailed list of 38 recommendations for addressing problems identified during the analysis phase of the scoping study and for dealing with anticipated changes in the external environment of the university. The full list of principles and recommendations arising from the RoUP scoping study are presented in *Appendix 5* of this case study.

The principles and recommendations set out within the scoping study report took as their starting point a model for the planning and management of the university's learning environment based on *three core processes,* all

of which were recognized to be highly interdependent. The core processes were defined as:

- *Managing the student experience.*
- *Providing personal support and development for students.*
- *Facilitating learning and curriculum development.*

The process of *Managing the student experience* is focused around the activities of recruiting, registering, inducting, accrediting and progressing students. It takes students through the university from initial contact to alumni status and ultimately lifelong learning. The process is intended to ensure a continuous and holistic approach to student guidance which is responsive to the learning and personal needs of students. It is facilitated through a personal tutor system (operating from the student 'offer' stage) and a continuous student record (initiated at the student enquiry stage). It recognizes the student's contractual relationship with the university and confirms the service entitlements and responsibilities of students in all aspects of university life.

The process of *Providing personal support and development* involves activities associated with the personal, welfare and recreational needs of the students. It brings together what were previously a disparate and often marginalized range of activities within the university. The process recognizes that student health and security must be seen as a precondition of effective student learning and progression. It further recognizes that recreation and leisure should be viewed as an integral part of the student experience and that opportunities for cultural development should be available to all students.

The process of *Facilitating learning and curriculum development* has a 'product' focus, being concerned with the design, development, delivery and review of programmes of study – generically described within the report as 'learning routes'. Within the terms of this process, learning routes are

designed and approved as part of a continuous, developmental process within agreed educational/resource parameters, institutionally defined. The process extends beyond the production of a design template (the programme scheme) to include the development of human, learning and physical resources necessary to achieve design intentions. (Using a metaphor from the manufacturing sector, the process is about designing the car not the blueprint). Review activities are also conceived as part of a continuous process rather than as review 'events'.

It was recognized that appropriate support processes would need to be put in place to facilitate the operation of the core processes. *Six key support processes* were identified for this purpose focused around the activities of:

- *managing staff*: how staff are recruited, trained, developed, appraised and rewarded;
- *managing information*: how information is collected, analyzed, stored, retrieved and communicated;
- *managing finance*: how revenue and capital resources are planned and managed;
- *managing physical resources*: how physical assets are acquired, used and replaced;
- *managing quality*: how quality is defined, maintained and enhanced;
- *making policies and plans*: how policies and plans are formulated, approved, implemented and reviewed.

The RoUP scoping study provided a framework for redefining the quality agenda within the university. In support of an agenda for 'total quality', the study proposed that the process of *managing quality* should be developed in relation to the needs of all of the core and support processes identified

within the scoping study – not just learning and curriculum development which has been the focus of the 'academic' quality model. In addition to broadening the scope of the quality agenda within the university, the study also offered a methodology for addressing:

- How quality is to be defined: the articulation of objectives and standards for a quality service which are customer-focused, specific, measurable, attainable across the university.
- How quality is to be planned and managed: the development of systems which provide confidence that given requirements for quality can be assured within and across 'functional' boundaries.
- How quality is to be maintained and enhanced: the establishment of performance-review systems, including external benchmarking, which facilitate continuous and transformative approaches to process improvement.
- How the costs of quality are to be assessed: examining the relationships between the costs of quality management (prevention/ detection costs) and the costs of quality mismanagement (internal/ external failure costs).

The framework of core and support processes identified in the scoping study report was intended to promote a more integrated approach to the organization of work within the university. To achieve this objective, it was recognized that the structures of the university would need to be aligned more closely to the needs of the core and support processes. For this purpose, it was proposed that a dedicated staffing provision be established to support the planning, management and review of each of the processes. Each process would have a 'process owner' responsible for the overall strategy and performance of that process, as well as 'process managers' responsible for the management of key activities (or sub-processes) within the process.

It was recognized that each process would need to draw on services and facilities from outside its core establishment. For this reason, the design, delivery and review of each process would be undertaken by 'process teams' working across functional and process boundaries. It was nevertheless intended that process owners would retain overall authority and responsibility for the needs and success of the processes. It was also proposed that a senior management team be established to ensure effective integration between the core and support processes of the university. An illustration of the conceptual relationships between processes, process owners and process teams is presented in *Appendix 6* of this case study.

The recommendations set out within the report of the RoUP scoping study anticipate a scenario which will enable the university to plan and market a 'total learning package', which is deliverable within the parameters of a clearly defined learning environment, contractually agreed with the various clients of the university. This scenario, which focuses on all aspects of a student's relationship with the university, is described within the report as 'facilitating student learning and personal development'. *The overall objective is to ensure that all high-level processes within the university are appropriately integrated and operated within the terms of a clearly defined learning environment which is strategically-driven, customer-focused and informed by the capabilities and constraints of the university.*

6. Implementation planning

The recommendations of the RoUP scoping study represent a comprehensive agenda for long-term change. Apart from changes to processes, structures and systems, the proposals are expected to have an enduring impact on culture and working practice within the university.

It has been agreed that the recommendations of the scoping study should be taken forward through a series of high-level process improvement projects

focused on the core and support processes of the university. A three-year plan for process improvement is envisaged for this purpose, consistent with the strategic aspirations of the university and the critical interdependencies that have been identified between the core and support processes. All process redesign options will also be evaluated against the generic criteria for process improvement set out in *Appendix 7* of this case study.

Process improvement projects will be carried out under the direction of teams established for each of the core and support processes. Whilst each team will have a specific focus, all teams will be working to the common principles and recommendations set out within the scoping study report, thereby pre-empting the fragmented approach which has characterized the development of existing processes. An overarching steering group has been established to oversee the process improvement programme. A new unit (under the direction of the author of this case study) has also been established to plan, direct, support and monitor process improvement projects within the university.

Success in implementing the recommendations of the scoping study will require an extension in the involvement of DMU staff and students. This will involve further consultation and a communications strategy aimed at increasing awareness amongst the wider university community of the outcomes of the scoping study and the benefits to be gained from a wide-ranging process improvement programme. More fundamentally, it is about the active participation of staff in the implementation of changes brought about by process redesign exercises and the identification of new roles and responsibilities consistent with the needs of a more process-based structure (e.g. process owners, process managers and process teams). A major review of the human resource management issues associated with process-based working will also be necessary (job analysis/redesign, recruitment and selection, staff appraisal and development, reward management, etc.).

Postscript to RoUP scoping study – the design of a continuous and fully integrated process for managing student entry to the university

Following the endorsement of the findings of the RoUP scoping study, a major project has been undertaken to review and redesign the process of student entry to the university. This process is conceived as the first phase of the core process, 'Managing the Student Experience'. Following discussions and workshops with a wide range of staff and students to further clarify the scope and opportunities for process improvement, the redesign exercise was carried out within an intensive ten-week period, by a team of seven, full-time, staff secondments, directed and managed by members of the new process improvement unit and an external adviser.

In redesign terms, the student entry process has been developed as a 'comprehensive and continuous process designed to help the university achieve and maintain the optimum recruitment and retention rates of students'. The process is scoped from the time when a potential student becomes aware of the university, to the point where he/she becomes fully established as a DMU student. Within these boundaries, five key sub-processes have been identified: 'attract applicants'; 'process enquiries'; 'process applications'; 'register students' and 'orientate students'. These sub-processes are conceived of as parallel rather than sequential processes and continuous, developmental processes rather than 'events'. The sub-processes are also intended to be highly interdependent.

The project report places great emphasis on the quality, consistency and integrity of advice given to students throughout the process. It is anticipated that improved student guidance will have a positive impact on the number and type of students who apply to and register with the university and on the overall retention rate of students. Apart from measures to improve application, registration and retention rates, the report includes proposals designed to improve the quality of the student/staff experience and the use of human, physical and financial resources.

The proposals set out within the project report are also aimed at achieving a more integrated approach to the management of the student entry process, whilst at the same time ensuring a service which is responsive to the needs of particular faculties, sites and client groups of the university. This is to be achieved by the reorganization of work around the needs of the process rather than 'functional' or departmental needs. A range of new process-based roles and responsibilities, reflecting institutional, faculty and site interests, have been proposed for this purpose. New structures to support the redesigned student entry process include the establishment of student advice centres, (aligned to a single call centre) and new integrated services for student recruitment, student registration and student orientation. These structural changes are intended to improve accountability and ownership for the effectiveness and efficiency of the student entry process.

Apart from structural changes, the project report proposes a number of key developments including:

- a new personal tutor system to support the learning and personal needs of first-year students,
- a personal portfolio to record the learning and personal needs of students prior to arrival,
- a review of the Part 1 curriculum to reinforce its diagnostic function,
- a comprehensive range of university-wide open days,
- a corporate knowledge base of DMU services and facilities,
- 'provisional' registration cards for use by prospective students,
- 'smart' cards for use by registered students,
- new protocols for complaints management,
- provisional student timetables, to be issued during the pre-entry phase,

- a new strategy for the allocation of residential accommodation to prospective students.

The scope for redesigning the student entry process is critically dependent upon the exploitation of information technology. The university's investment in a new, integrated student data system has made it possible to develop a single, continuous student record and thereby remove much of the duplication evident within the existing process. The networking of this system will also make it possible for information to be used simultaneously in many places, at the same time. It is anticipated that students will be able to register direct, electronically, at distance. Centralization or decentralization will no longer be an issue, since staff and students who are physically apart, can make informed decisions based on shared knowledge.

The cost-benefit analysis presented as part of the project report, highlights a number of tangible and intangible benefits that will result from adopting the redesign proposals. Tangible benefits include recurrent savings in the total cost of the process, to be offset, in the first year only, by transitional staffing costs (mainly staff retraining) and capital costs. Tangible benefits also include expected (targeted) improvements in recruitment, retention and progression rates that will bring financial as well as quality benefits. Less tangible (though still measurable) benefits include better services for students and improved staff morale.

The student entry project was developed as a test model for undertaking high-level process change within the university. The decision to second seven (mainly academic) staff to carry out this work, on a full-time basis, was groundbreaking for the university and, probably, for the sector as a whole. It underscored the commitment of the university to accept the investment costs associated with large-scale organizational change. It also reflected the importance of maintaining momentum within the process improvement programme.

The completion of a project of this scope and complexity within a ten-week period (including completion of the project report) required effective planning and the use of project management tools and techniques. Protocols for the selection of project team members also differed significantly from those traditionally associated with the operation of committees and working parties within the sector. A detailed knowledge of the existing process was not seen as essential for what was essentially an 'outside-in' project. Nor was it intended that the project team should be representative of the particular departments or faculties currently associated with the operation of the process. Rather the key criteria for selection were that that members should show evidence of a commitment to change, a 'customer-focused' orientation, creative and analytical skills, teamworking capabilities, communication/ networking skills, and the ability to start and finish a project.

A formal evaluation of project outcomes confirmed the effectiveness of the methodology used in this exercise and its broad applicability to other process improvement projects. Apart from the tangible outcomes of a report with far-reaching implications for the university, the project had provided a major vehicle for staff development. In particular, it had offered the participants fresh insights into the causes of recurrent problems within the university and new ideas on ways of resolving these problems. These benefits will be exploited through the full participation of the project team in the implementation phase of the project.

Implementation of the findings of the student entry project will require changes to the structures, systems and culture of the university. Within the context of these requirements, the implementation plan includes provision for the validation of the redesign proposals with key stakeholders and the widespread communication of these proposals to the wider university community. It will also involve pilot testing, including the detailed analysis of the activities and tasks associated with the redesigned process and the fine tuning of these proposals in a controlled environment. All staff affected

by these changes will be involved in shaping these new working arrangements: a recognition that whilst high-level process redesign must necessarily be undertaken as a top-down exercise; the implementation of the redesign solutions must be undertaken bottom-up.

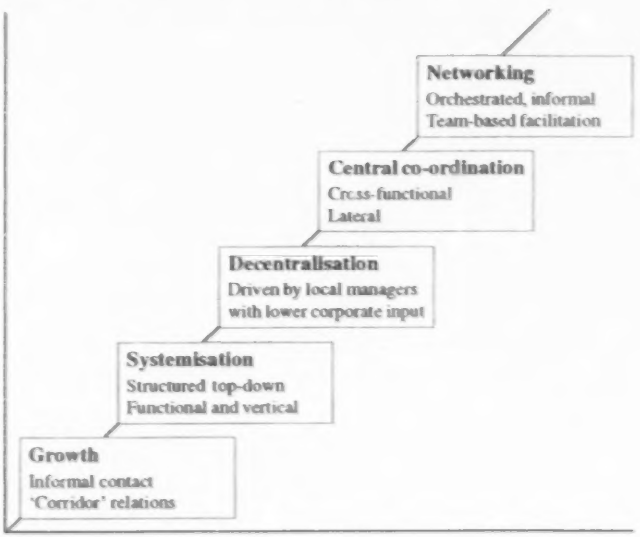
The implementation of the findings of the student entry project will need to take account of other 'emergent' internal and external changes in the university's environment. It will also need to address the critical interdependencies that exist with other core and support processes within the university. The overarching plan for process improvement will be further developed and refined for this purpose.

Chapter VI
Reflections on the DMU experience

1. Organizational development within DMU – from function to process?

All organizations go through a development path in which they are required to adapt their structures to meet changes in their operating environments. The structures that once served to solve problems become problems in their own right. The following analysis, using edited extracts from Quirk (1996), offers instructive parallels to organizational changes within the university during the period examined as part of this case study. The outline features of this development are illustrated in *Figure 8* below.

Figure 8. Stages of organizational development



Source: Quirk (1996)

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Systemization and decentralization

"The first stages of development will be instantly recognizable – a company grows ... and begins to organize itself more formally within a structure which emphasizes functional specialization and departmental efficiency ... The business begins to allow greater delegation of responsibility, while talking more of local empowerment ... Senior managers in the division are allowed to get on with the job, reporting regularly to the centre on progress against agreed budgets.

Greater accountability for cost and results (within these functional units) creates greater sensitivity to carrying apparently unproductive management overheads... Middle managers feel they are weighed down by the policies and practices developed by the management centre and that centralized approaches do not fit with different local parts of the business. Though they may acknowledge the need for consistent standards and procedures across the business, they increasingly pursue their own initiatives tailored to local needs ... The leadership is seen to be less in touch with the customers, while those at the sharp end feel they are the ones better placed to know what is really good for the company ... The overall business picture is neglected for a clear picture of the function's role and purpose. Departments have little contact with each other.

Problems begin when divisional managers are seen to be going too far in their local initiatives and disregarding the interests of the organization as a whole ... Autonomy then creates a parochial attitude and an unwillingness to sa ·ifice local interests and benefits for the good of the business as a whole. Employees focus on local issues and priorities, and do not appreciate the wider picture. Internal competition increases and divisions are found to be reinventing wheel after wheel. What started as healthy decentralization now seems to be toppling into fragmentation and managers at the centre worry that the benefits of being a single organization are being lost".

Central co-ordination

"Businesses that decentralized in the recent past are discovering that autonomy in some decentralized units turned into something closer to a unilateral declaration of independence ... In a bid to maximize the benefits of having divisions within the same group, a bid is made at the centre to half the fragmentation. Corporate function staff are increased at the centre to develop and implement company-wide programmes of control and review for line managers. Some technical functions, such as information technology, are centralized at headquarters, while daily operating decisions remain decentralized. Communication is co-ordinated more strongly from the centre.

All of these new co-ordination systems prove useful for achieving growth through more effective allocation of a company's limited resources. They prompt managers to look beyond the needs of their local units and to feel part of a greater whole. Employees still identify with their local units, but are bolstered by the security of being part of a financially strong group and by the kudos of working for a well-known corporate name. Managers retain much of the local decision-making responsibility, but spend more time accounting for, and explaining, decisions to the centre ... *This is not a move back to centralization but to greater co-ordination, in an attempt to stay close to the market and take advantage of any internal synergies that exist"* (my emphasis).

This shift from a highly devolved model of management towards a more integrated approach mirrors a broad shift in organizational development that has taken place within the university over the last few years. It is witnessed in the change from 14 academic schools to 6 faculties and the establishment of new campus offices to co-ordinate operations at different sites of the university. It is apparent in moves to establish a university-wide modular curriculum. It is evident in the decision to develop a single student data system, based on a continuous student record, accessible to staff and eventually students, across the university. Above all it is reflected in the

sponsorship of the Review of University Processes, a radical, long-term project aimed at promoting a more corporate, process-orientated, approach to the organization of work within the university.

Networking

The aim of the RoUP project is not to develop more centralized structures for managing the processes of the university, but rather to redesign these processes in ways which will reflect both institutional and local needs. Nor should changes to structures and systems to improve process management result in a more regimented, hierarchical approach to the organization of work within the university. Rather they are intended to create a more flexible organization, using new forms of teamworking across functional and departmental boundaries.

As Quirk observes "... once the organization, and the markets it serves, have grown too complex for regimented systems, formal procedures and controls are seen as too inadequate to manage the complexity of the organization. There is a need to use the informal power of relationships to make the organization work. Working with their teams, managers help them to identify the networks of influential colleagues whose help and support is needed. The move to managing a network, rather than a hierarchy, requires a more flexible approach to management. The focus is on solving problems quickly through bringing together teams from across functions. Teams are assembled to meet a particular problem, and may be disbanded again once the problem has been addressed. Communication centres on establishing networks as a means of creating co-operation and sharing knowledge. Electronic discussion databases allow them to continue debates and pool views, approaches and experience despite geographical separation."

This, broadly, is the vision of organizational change to be pursued through the Review of University Processes.

2. Quality improvement or quality transformation?

The development of quality systems within United Kingdom higher education has been driven, primarily, by the accountability requirements of external quality agencies. Notwithstanding the comparative success of such agencies in raising the profile and understanding of 'quality' issues within the university sector, their role in promoting organizational change has been less evident.

Following Middlehurst (1997), it is suggested that the focus on accountability may be inhibiting the developmental work necessary for higher education institutions to survive in a rapidly changing, competitive environment characterized by:

- increased competition from new HE providers;
- shifts in the funding of higher education (from state to student funding);
- student hardship and litigation;
- the impact of new technology on the management of information and learning;
- the growth of distance/work-based /experiential learning;
- the development of lifelong learning;
- the globalization of higher education.

Middlehurst suggests that a fundamental re-alignment in approaches to quality management may be necessary in order to respond to these changes. This will require a shift from a model based on quality control (checking whether quality objectives have been achieved) to one based on quality assurance (ensuring that quality objectives will be consistently met). It will also demand a shift from an approach based on incremental quality

improvement to one based on quality transformation. This may be illustrated, diagrammatically, as follows.

Quality control	***Quality assurance***	***Quality improvement***	***Quality transformation***
maintaining quality		enhancing quality	
detection	prevention	incremental	step-change

As noted in *Chapter V* of this report, incremental or continuous improvement is normally associated with small-scale changes to processes at a local/departmental level, often without reference to their impact on other parts of the organization. It encourage staff throughout the organization to ask the question – 'can we do things better?' In contrast, quality transformation starts from a conviction that incremental changes are no longer sufficient to achieve corporate objectives and that a more radical approach to organizational change is necessary. This demands answers to the more fundamental questions – 'are we doing the right things' and 'can we do things differently?

As a transformative approach to quality management, Business Process Re-engineering is now seen by some commentators as the only viable option for responding to the imperatives for change now facing higher education. Such a view is based on the conviction that BPR can offer:

- a strategic focus for quality improvement – not 'unplanned incrementalism';
- a focus on the totality of the educational process;
- an agenda for responding to institutional as well as local needs;
- improved levels of efficiency and the optimization of resources;

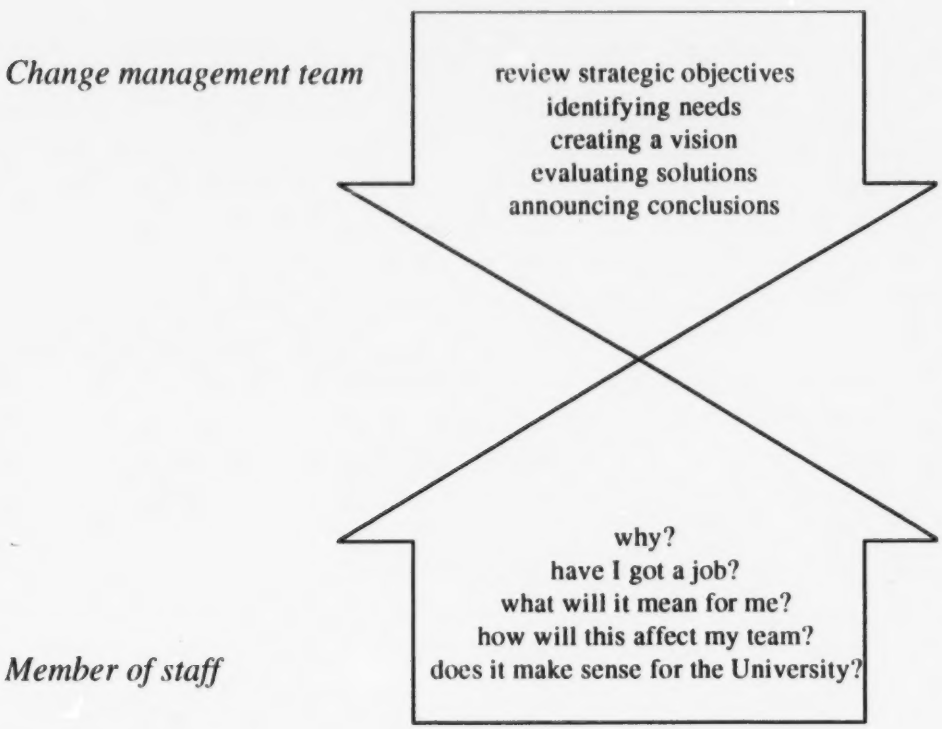
- opportunities for exploiting the full potential of information technology;
- a working environment where staff can maximize their skills and abilities;
- the potential for dramatic and sustainable improvements in product and service quality;
- improved educational outcomes.

There are, however, major trade-offs which need to be assessed before a decision is taken to embark on a re-engineering programme. BPR focuses on the high-level analysis and redesign of institutional processes. In general terms, the higher the level of process analysis, the greater the scope for organizational change and improvement. Conversely, the lower the level of process analysis, the easier to implement organizational change. The first point to consider is, therefore, the performance status and potential of the process under review. How broken is it? How much can it be improved? What are the potential benefits of radical change for the organization, for its customers and for its staff? Is there a better-known way of doing things? Are new technologies available?

The constraints on high-level process redesign also need to be considered. BPR cannot be undertaken without some level of risk. The chances and consequences of failure will therefore need to be assessed. Judgements will also need to be made as to the likely level of resistance to radical change. This will depend crucially on staff tolerance of the *status quo* and the legacy of any previous change programme. A major change-management programme is unlikely to be successful without winning the hearts and minds of staff. This is particularly true within a sector where power structures rarely reflect the formal hierarchies within organizations and where attempts to introduce 'top-down' change may be seen as inimical to the traditions of professional autonomy. The difficulties associated with

introducing 'top-down' change are graphically illustrated in *Figure 9* below – the 'communications collision'.

Figure 9. The 'communications collision'



There are also trade-offs to be made that derive from the scope of the process redesign exercise. Because BPR is ultimately concerned with integrating the redesign effort across all the processes of an organization, it is relatively easy to maintain the focus and momentum behind the change programme. The success of such a programme will, however, require the active involvement and support of all senior managers within the organization. Compared with incremental improvement programmes, BPR is also harder to control and to integrate with emergent change.

The scope of the BPR project is likely to set markers on the time-scales for completion of a high-level process improvement programme. A programme for the redesign of all the core and support processes of a university is unlikely to be completed in less than a three-year period. The required changes to the culture and practice of the organization will only occur over a much longer period. BPR is about looking for 'quick wins', but it is not about looking for 'quick fixes'. It should be used and evaluated accordingly.

Since incremental improvement is normally associated with changes to processes at a local/departmental level, it may be best suited to organizations with a loosely knit or 'federal' structure. Through the redesign of institutional processes, BPR seeks to promote corporate as well as local needs. It is best suited to what might be termed 'monolithic' organizations that have or seek a clearer corporate identity. It will, therefore, represent a major challenge to the prevailing culture of most higher education institutions. It can be argued that the quality paradigms used by external agencies have done little to promote a corporate culture within HE institutions.

It is unlikely that BPR will achieve significant improvements in institutional performance without recognizing the investment costs of high-level process change. The costs of releasing staff to work on process improvement projects will need to be assessed. The capacity to manage or resource a large number of simultaneous process improvement projects is likely to be seriously questioned in many universities. The transitional costs associated with process redesign options also need to be considered, including the costs of introducing new technology and, perhaps more importantly, the costs of staff training and development necessary to facilitate new ways of working in a process-based structure. It should be noted here that the cost-benefit implications of high-level process redesign can only assessed by developing measures of process, as well as functional, performance (see *Chapter VI, point 3* below).

In summary, the case for quality improvement, focused around incremental or transformational change, can only be assessed by examining the following issues:

- the nature and scale of the 'problem';
- the required pace of change;
- the risk/fear of failure;
- the degree of staff resistance to change;
- the desired form of corporate identity (federal or monolithic);
- the commitment of senior management to a corporate change programme;
- the scale of staff involvement in the change programme;
- the resources required to both plan and implement the change;
- the required level of structural and systems change;
- the costs and potential benefits of the change programme;
- the compliance requirements of external agencies.

The success of the change programme will depend on the degree to which these issues have been adequately addressed at the planning stage.

For HE institutions facing the challenges of the new millennium, process re-engineering offers the opportunity to redefine the 'whats', 'whys' and 'hows' of an educational process. This will pose a major challenge to the culture and practice of most higher education institutions. Although the rethinking of the purposes and working practices of a university should be radical, the implementation of any major changes will need to be made in measured steps. It will also require an appropriate balance to be struck between long-term and short-term goals and between corporate and local

needs. All staff will need to understand and be committed to the change programme. Though BPR is intended to be radical and interventionist in nature, it presupposes bottom-up implementation of redesign proposals and a cycle of continuous process improvement until the need for intervention is established.

3. Towards an integrated framework for institutional quality systems

This case study has described and critically evaluated two models of quality management, which have been introduced within a major United Kingdom university over an eight-year period. The lessons derived from this experience suggest that there are a number of organizational, technical and cultural imperatives that must be addressed in developing and sustaining an institutional quality system. Taken together with the issues identified in the previous section, these imperatives provide an agenda for the further development of the DMU approach to quality management. They are also presented as a contribution to the debate on the development of a national system of quality assurance that is founded on the institutional capability for self-regulation and improvement rather than on inspection principles.

Defining objectives and standards for a quality service which are 'mission' driven, customer focused, specific and attainable

Quality programmes invariably include an exhortation to improve something. Regrettably they too often fail to clarify the purposes of such programmes and the intended beneficiaries. This ambiguity has been a major factor in inhibiting the development of institutional quality systems within United Kingdom higher education.

'Quality' may be simply expressed as doing the right things right. From an institutional perspective, 'doing the right things' means reaching agreement

on objectives and standards for a quality service which are responsive to institutional goals, local needs and the expectations of external stakeholders – a view of quality as the 'satisfaction of *agreed* stakeholder needs'. Quality objectives (as subsets of other institutional objectives) should be consistent and SMART – specific, measurable, achievable, results-orientated and time-deadlined. They should also be set an appropriate level – a concern with fitness of purpose as well as fitness for purpose.

The policies and plans of the university should provide the ultimate criteria against which activity is directed and performance assessed. Institutional policy objectives must, however, be deployed consistently and appropriately at different levels of the organization if a sense of common purpose is to be established. The willingness of staff to engage in quality systems shaped by institutional policies and plans will be contingent on perceived opportunities to inform strategic decision-making and the capacity to translate such policies in ways which are appropriate to local needs. Effective communication is also essential – quality goals must be understood and accepted by those affected by them.

Quality policies and plans must also be demonstrably relevant to the needs and expectations of students and other 'customers' of higher education institutions, as well as those of regulatory agencies. To define students as customers is to do no more than to confirm their rights *and* responsibilities as active participants within an educational process. Student charters and/or learner agreements are no more than formal expressions of these rights and responsibilities.

Most universities work within a provider-centred view of academic quality where the needs of the customer (internal or external) are poorly defined. To develop a model of quality with a service focus presupposes that staff, including senior managers, view higher education as a service – many do not and this is clearly the size of the cultural challenge. A strategy for

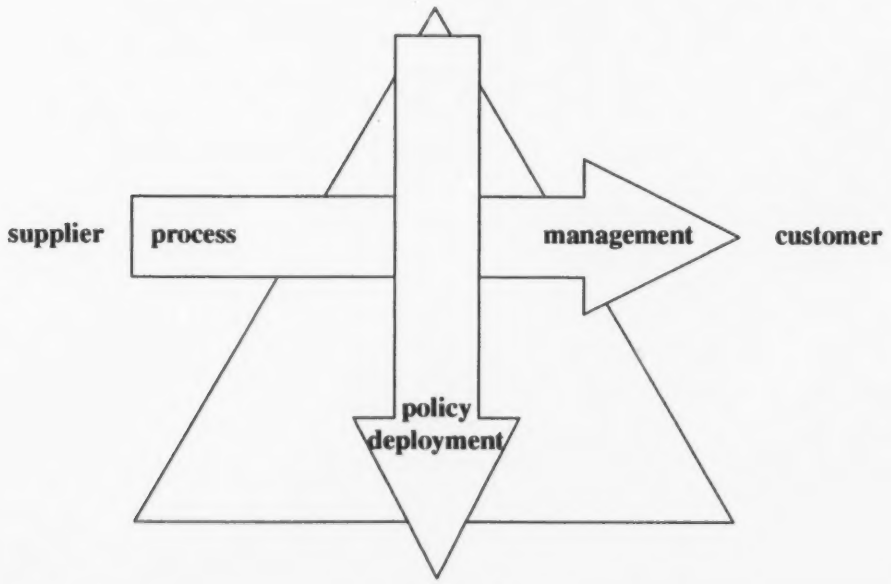
service quality must, however, extend beyond customer-care programmes. It requires an effective provision for identifying student needs and expectations and a willingness to use such information as a key resource within quality planning and other decision-making processes of the university.

Planning and managing processes in order to provide confidence (assurance) that given requirements for quality can be satisfied

Quality will not happen by chance – it must be planned and managed. Quality is, in other words, about doing the right things *right*. Despite this apparently self-evident truth, most quality systems within higher education continue to be based on reactive, inspection-based methodologies. In short, such systems work in a detection mode (have we done the job correctly?) rather than in a prevention mode (are we capable of doing the job correctly? do we continue to do the job correctly?).

Effective quality planning and management is about designing quality into the work of an organization (i.e. it is about assuring not controlling quality). This requires not only a consistent vertical alignment between the quality objectives set at different *levels* of the organization *(quality policy deployment)* but also the horizontal integration of activities across the *functions* of the organization *(process management)*. The relationship between process management and policy deployment in the planning of quality is illustrated in *Figure 10* below.

Figure 10. Relationships between process management and policy deployment in quality planning



Processes should be managed in ways that provide confidence (assurance) that given requirements for a quality service will be satisfied within and *across* the various faculties, departments and sites of the university. Traditional work structures within higher education continue to emphasize functional specialization and departmental efficiency, and yet the key services provided to students generally cross departmental boundaries and are 'owned' by nobody. Process management is a customer-driven approach to quality, providing the framework for co-operation across functional or departmental boundaries. It requires effective teamwork and the delineation of roles and responsibilities in relation to process needs.

Once the high-level processes of the organization are identified, these can be decomposed into sub-processes for which performance measures can

be established. These measures, expressed as targets to be reached by a given date, become the objectives for the next sub-process level. Unlike 'management by objectives', which tries to get the most out of the person/ functional unit, quality policy deployment tries to get the most out of the process.

Quality should be planned and managed across *all* the core and support processes that support the educational mission of the university. This will require an understanding of the crucial interdependencies that exist between, as well as within, the processes of the organization. Such an agenda for 'total quality' is consistent with a view of quality assurance as 'all those planned and systematic actions necessary to provide confidence that a product or service will satisfy given requirements for quality' (British Standards Institution, 1987). The capacity of a university to design, market and deliver a 'total learning package' would be tangible evidence of an educational institution committed to the principles of total quality.

Performance monitoring and evaluation to facilitate quality improvement

All quality management systems need a feedback loop. Protocols for performance monitoring and evaluation are necessary to ensure that the organization is meeting its objectives and satisfying the needs and expectations of its external customers.

Performance measurement is the only way to tell whether a product or service needs improving or not. Higher education, nevertheless, retains a highly equivocal stance towards performance measurement, notwithstanding reassurances regarding the use of monitoring data to support professional judgements. Proposals to articulate quality standards, in ways that demand *evidence* of performance, are still resisted in some quarters; the 'intuitive' model of quality ('you know it when you see it') continues to hold allegiance from a provider-centred perspective.

Performance monitoring should involve the use of quantitative and qualitative data, from internal and external sources; provision for feedback from appropriate stakeholder groups; tools and techniques for data collection and facilities for 'benchmarking' performance against best practice within the sector. Monitoring data should be used in the evaluation of performance against agreed objectives. Provision should exist for both formative and summative evaluation in order to facilitate continuous and step-change approaches to quality improvement.

Consistent with the federal structures of most higher education institutions, monitoring and evaluation is normally associated with the performance of functional or discipline-based units rather than institutional processes. Whilst this practice allows for performance to be assessed against local needs (mainly for internal accountability), it obscures the degree to which such units may optimize their performance at the expense of the entire process. Measures should therefore be developed to assess process performance, including measures of:

- process effectiveness: the ability of a process to achieve required outputs;
- process efficiency: the level of human, physical, financial resources required to operate a process;
- process flexibility: the ability of a process to handle different or fluctuating demands or needs;
- process cycle time: the elapsed time required to convert an input into an output;
- process capacity: the volume throughput potential of a process.

Proposals for quality improvement should be linked into the institutional processes of planning and budget setting. This imperative reflects findings

that quality improvement exercises undertaken outside of the planning cycle will, in general, be marginalized and under-resourced. They will also result in improvement initiatives that are localized and ad hoc. Links to the budget-setting process will also be necessary to provide resourcing support and/or financial incentives for quality improvement.

Measuring the 'costs of quality'

Quality management should be approached from the standpoint that the benefits will exceed the costs, i.e. the costs of preventing quality problems will be less than the costs of failure. Quality costing is therefore about measuring the benefits of quality improvement.

Quality systems within higher education are rarely assessed in cost-benefit terms. In part, this reflects their status as compliance systems, designed primarily to satisfy the accountability requirements of external quality agencies. It also reflects the fact that, like many key activities within the educational process, quality management is viewed as a bolt-on exercise, to be undertaken as a 'part-time' job by (untrained) academic staff, as a 'free' resource. More fundamental still, is the failure to address the costs of quality *mismanagement* – the quality losses that arise from 'customer' dissatisfaction and the failure to make optimal use of human, physical and financial resources.

In order to assess the 'costs of quality', it is necessary to understand the relationships between the cost of preventing quality problems (quality planning and management); the cost of detecting quality problems (quality control); the cost of internal failure (dissatisfied internal customers) and the cost of external failure (dissatisfied external customers). The case for quality management starts from the premise, rarely advanced in higher education, that the costs of prevention are cheaper than the costs of detection, which are cheaper than the costs of internal failure, which are cheaper than the costs of external failure.

In order to measure the 'costs of quality', it is necessary to identify the direct costs of activities which make up the core and support processes of an organization, as well as the 'hidden costs' which result from the failure of these processes. Most higher education institutions are able to determine the costs of individual departments, whilst few are able to identify the costs of individual processes. Process measurement, using activity-based costing methods, offers the opportunity to assess the costs of quality, including the costs of internal failure (duplication, waste) and external failure (dissatisfied/ unsuccessful students). Until these requirements are more fully understood and practised in higher education, it will be difficult to justify quality systems in cost-benefit terms.

Managing for quality – overview of key elements

From the foregoing analysis, it is suggested that a number of key questions need to be addressed in the development and review of an institutional quality system. These may be summarized as follows.

- Does the organization have a defined policy on quality?
- How are customer needs and expectations to be addressed within the quality policy?
- Have staff been consulted in developing the quality policy?
- Are quality objectives and standards for a quality product/service clearly defined?
- Are these deployed consistently throughout the organization?
- Are they defined in relation to customer needs and expectations?
- Are quality objectives/standards measurable and achievable?
- Have they been made clear to all concerned?
- Have the processes and systems for assuring quality been defined?

- Do they satisfy customer needs and expectations?
- Have they been made clear to all concerned?
- Are resources adequate to meet the needs of the processes?
- Are roles and responsibilities clearly defined?
- Have people been adequately trained to carry out these roles?
- Is there a monitoring system to check that quality standards are being met and systems followed?
- Are appropriate tools and techniques used to analyze the causes of quality problems?
- Is there a system for evaluating the outcomes of the monitoring system?
- Does the evaluation lead to corrective action?
- Are people rewarded for achieving high quality?
- Is there a process for monitoring the costs of operating the quality system?
- Do the benefits exceed the costs?

Promoting institutional self-evaluation and improvement

Consistent with the expectations of external agencies, quality systems within United Kingdom higher education institutions remain focused around issues of 'academic quality', centred on the quality and standards of educational programmes and the activities of academic departments. Such practices belie the fact that the causes of most quality problems in organizations are systemic in nature, i.e. they can be attributed to inappropriate policies or badly designed processes.

Academic staff and academic departments are often blamed for problems, or asked to solve problems, not of their own making. As a result, inappropriate solutions are often formulated, at the wrong level, without addressing the root causes of the problem. Staff become frustrated when their efforts fail. According to Juran (1988), 85 per cent of the quality problems within organizations are the result of poorly designed processes. It follows that 85 per cent of the problems lie with management, since it has control over those processes.

Quality must be viewed from within an institutional context. By defining the key, high-level processes of a university, and the crucial interdependencies that exist between them, it is possible to develop systems for maintaining and enhancing quality, which focus on all aspects of an 'educational' process. A focus on the performance and improvement of institutional processes should not, however, obscure the wider institutional context in which quality improvement must take place.

The 'business excellence' framework, developed by the European Foundation for Quality Management (EFQM), has the distinct merit, over other quality awards, in locating process improvement programmes within the wider context of organizational development, including people and resource management. It therefore provides a clear focus for the development of change-management programmes within higher education institutions.

The EFQM framework consists of nine elements, each representing an area of activity that contributes critically to an organization's success. The elements are grouped into two broad areas: enabling factors and result factors. *Enabling factors* include leadership, policy and strategy, people management, resources and processes. *Result factors* include people satisfaction, customer satisfaction, impact on society and business results. Each element is weighted to reflect its comparative importance in the overall framework. A summary description of the key elements of the European Quality Award is presented in *Appendix 8* of this case study.

The EFQM model is underpinned by concepts which are fundamental to quality management including: customer focus; integrated policy and development; consistency of purpose; the active involvement of senior managers; the involvement and development of staff; the management and improvement of processes, performance measurement, public responsibility and a commitment to achieving results.

The award framework enables organizations to review their activities and results in each of the nine elements of the framework and thereby assess their progress towards quality improvement. The award is based on a system of self-assessment that requires organizations to:

- plan for self-assessment,
- collect views, information and data on current position,
- ask searching questions about the organization,
- identify strengths and areas for further improvement,
- identify the priority opportunities,
- develop and implement actions based on these opportunities,
- review and repeat these activities as part of a cycle of improvement.

The case for self-assessment in any quality system is advanced on the premise that an internalized approach to quality management is more likely to be effective than an approach based on external regulation and control. The level of quality ownership within an organization will be dependent on management commitment to self-regulation at a policy level and the capacity to engender critical self-reflection at all levels of the organization.

The same principles of quality ownership need to be developed at a national level where it is evident that the accountability functions of quality assurance agencies have inhibited efforts to promote a more internalized

approach to quality management within individual institutions. This is likely to have serious implications for the capacity of such institutions to respond to the pressures for organizational change now facing the whole of the higher education sector.

The principles and practice underpinning the DMU approach to quality management can usefully be examined in the light of growing demands for a national system of quality assurance founded on the institutional capability for self-evaluation and improvement, rather than based on 'inspection' principles. In this context the paper identifies, through a review of the DMU experience, some of the generic factors which are seen to have a bearing on the capability for institutional self-regulation.

Appendices

Appendix 1

De Montfort University

Student and staff numbers (1997/98)

	Actual number enrolled	Full-time equivalent*	Fte as a percentage
Total number of students	33350	22700	100%
Total based in the UK	32200	21850	96%
Total based overseas	1150	850	4%
Total at each UK centre			
Bedford	4600	2945	13%
Leicester	18350	14275	61%
Lincoln	6350	2530	11%
Milton Keynes	1250	1050	5%
Studying overseas	1150	850	4%
Linked colleges	1650	1400	6%
Total by mode of study			
Full-time	13300	3835	81%
Part-time	14500	4485	19%
Total by level of study			
Further education	9500	2250	8%
Higher education	23850	20800	92%
Total international students	2550	Percentage of total student number	7%

*Full-time equivalent (fte) figures are based on the following: Year-out sandwich placement students = 0.5, part-time undergraduates = 0.6, part-time postgraduates = 0.5.

Student age on entry for full-time undergraduates	**Under 21**	**21-25**	**Over 25**
Bedford	80%	9%	11%
Leicester	76%	12%	12%
Lincoln	67%	16%	17%
Milton Keynes	58%	12%	30%
Linked colleges	66%	15%	19%
Average (weighted)	**74%**	**12%**	**14%**

Student gender by centre for students based in UK	**Female**	**Male**
Bedford	64%	36%
Leicester	50%	50%
Lincoln	56%	44%
Milton Keynes	47%	53%
Linked colleges	40%	60%
Average (weighted)	**50%**	**50%**

Staff numbers (at October 1997)	
Academic full-time staff	1200
Academic part-time staff	1100
Support staff	1900
Total number of staff	**4200**

Appendix 2

Programme review – a schematic overview

I. Formative review

1. Review cycle

Programme entry

- student target group
- student access
- marketing strategies
- publicity & pre-entry guidance
- enrolment process
- student induction

Programme management & resources

- programme management team
- student feedback mechanisms
- employer liaison
- multi-site operations
- staff support
- staff development
- learning resources
- physical resources

Programme structure & delivery

- programme content
- programme structure
- teaching and learning strategies
- student guidance & support
- enrolment process
- assessment strategies

Programme outcomes

- progression rates
- award success rates
- student destinations

2. Review process

Performance monitoring | **Self-evaluation** | **Improvement plans**

II. Review summary

Programme appraisal

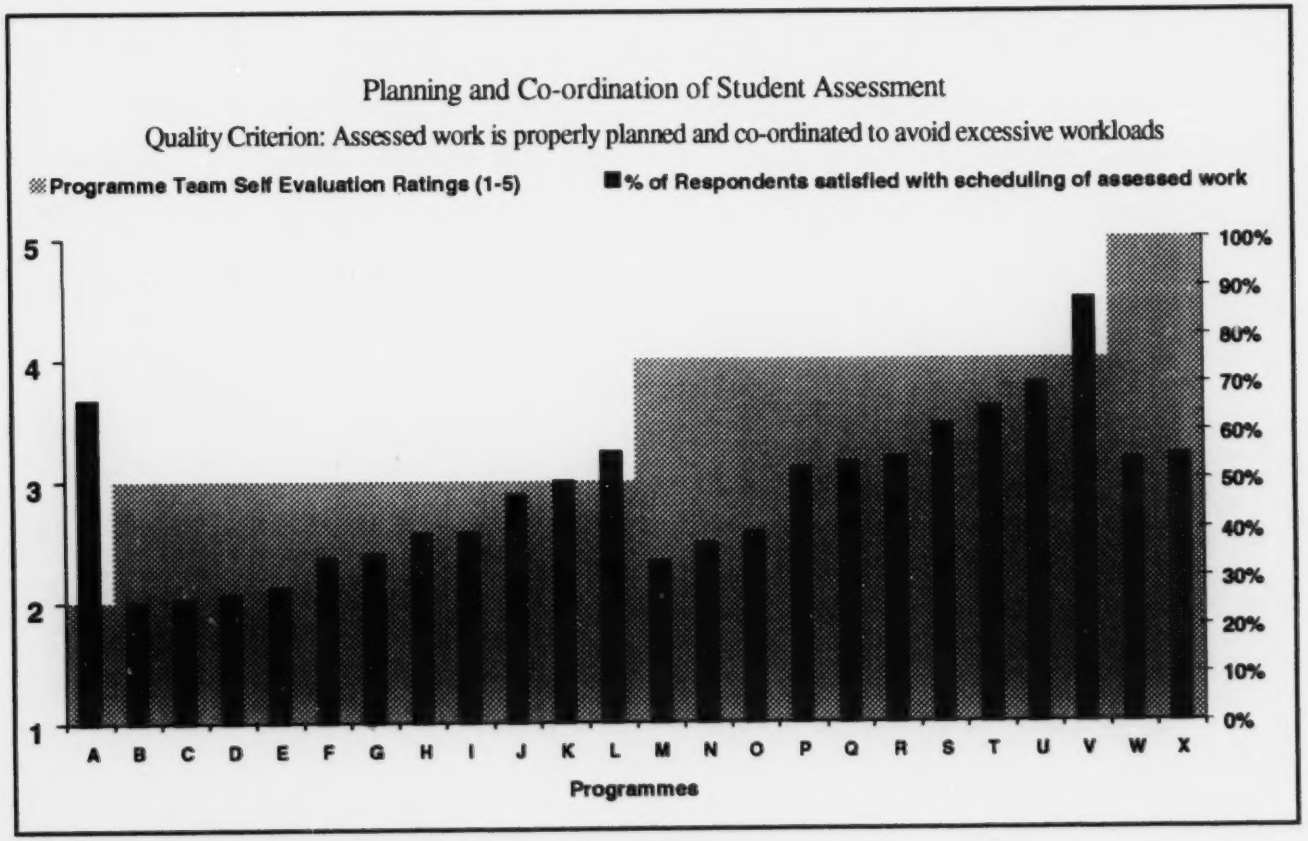
- achievement of programme objectives
- fulfilment of School/University policies and plans
- satisfaction of student needs/expectations
- satisfaction of external quality standards

Programme development

- programme strengths
- programme weaknesses
- actions taken this year
- actions still required

Appendix 3

Use of student feedback data[1] to triangulate against programme team self-evaluation ratings



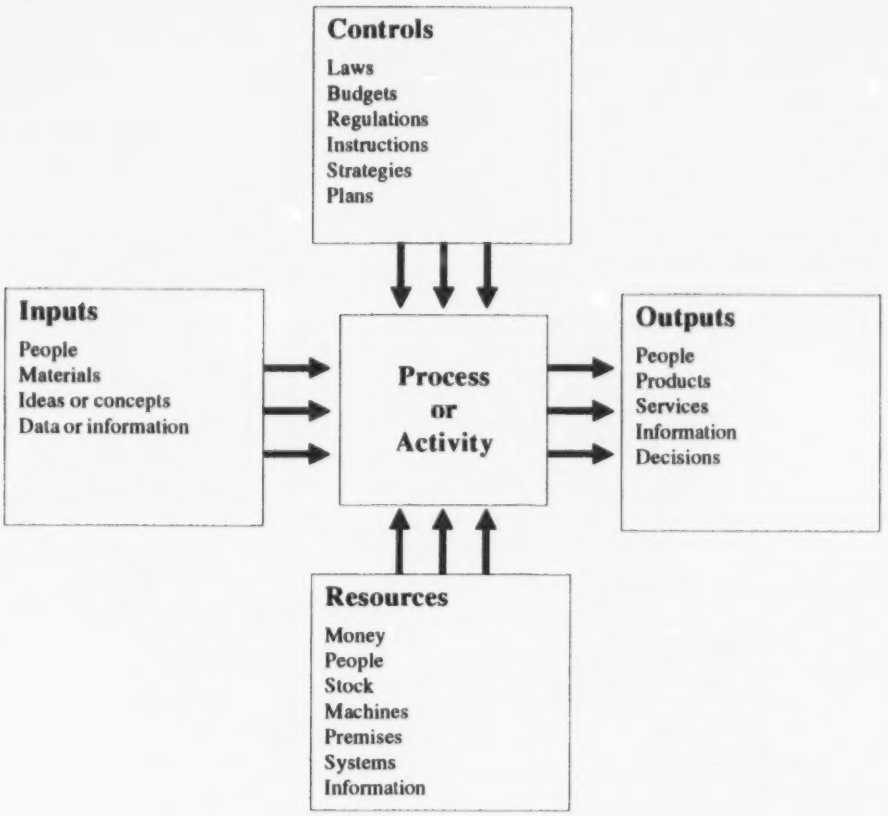
[1] Student feedback obtained from institutional student satisfaction surveys

Appendix 4

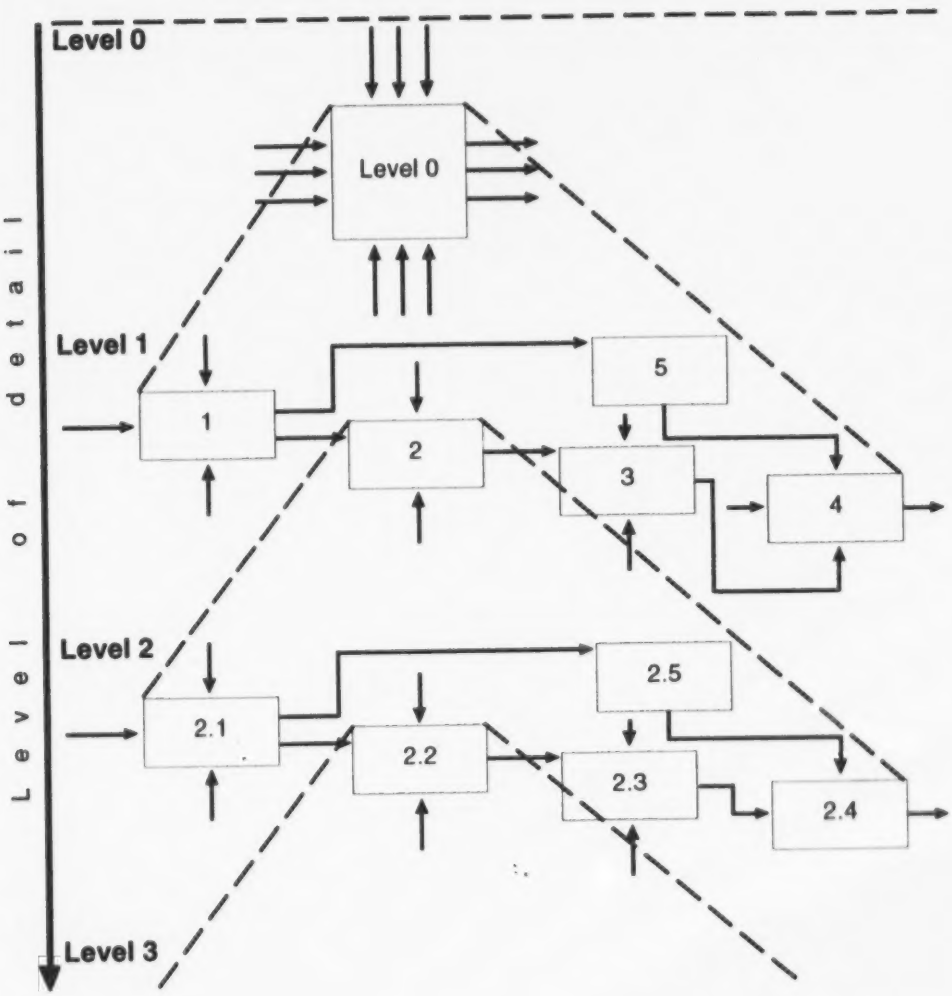
Analyzing different levels of a process – the process hierarchy

IDEFO – Integrated Definition Method (International Standard for Process Mapping)

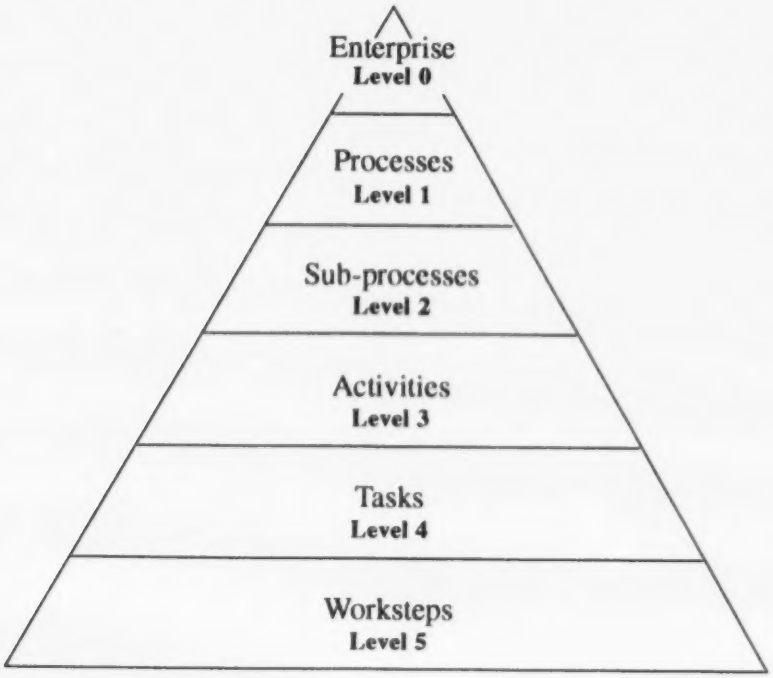
1. A process is an activity or series of related activities that use resources and controls to convert inputs (from suppliers) into outputs (for customers)



2. Processes can be examined at different levels of analysis…



3. The processes and activities of an organization can then be decomposed thus…



Appendix 5

Review of university processes – principles and recommendations for process redesign

Principle 1	**The processes of the university should be strategically driven and linked to the goals, capabilities and constraints of the university**
Recommendation 1	Strategic parameters should be developed for planning and managing the processes across the university. These parameters should define the scope and limits of the learning environment.
Recommendation 2	Service standards should be developed which are mission sensitive, customer focused, measurable and attainable within the terms of the agreed learning environment.
Recommendation 3	The student's relationship with the university should be expressed through a 'learning contract' based on defined service entitlements and responsibilities for students.
Recommendation 4	The university should commission and 'own' the learning routes.
Recommendation 5	The processes should maximize opportunities for lifelong learning by removing artificial barriers to learning – time, place, mode of study.
Recommendation 6	Coherent 'values' statements, with underpinning support mechanisms, should be developed to inform the design and operation of the processes.
Recommendation 7	The case for 'rational diversity' in process design must be demonstrated (e.g. to meet particular client/market/ location needs).

Principle 2	**All processes should be continuous, developmental and integrated**
Recommendation 8	Learning routes should be designed, developed, approved, delivered and reviewed as part of a continuous, developmental process.
Recommendation 9	Recreation and leisure should be recognized as an integral part of the student experience.
Recommendation 10	Effective protocols should be established for maintaining contact with prospective students.
Recommendation 11	Processes should be established for identifying and planning for student learning/career needs before student entry.
Recommendation 12	Options for rescheduling the enrolment process should be considered to focus on the social and personal needs of students on entry to the university.
Recommendation 13	Student induction should be conceived as part of a learning continuum.
Recommendation 14	Student health and security should be recognized as a precondition of effective learning.
Recommendation 15	A continuous and holistic approach to student guidance should be adopted which is responsive to the learning and personal needs of students.
Recommendation 16	Assessment should be used to develop as well as to accredit student learning.
Recommendation 17	Assessment should be planned and scheduled to match stated learning outcomes and to avoid excessive workloads for staff and students.
Recommendation 18	Students should be able to learn and be accredited at their own pace.

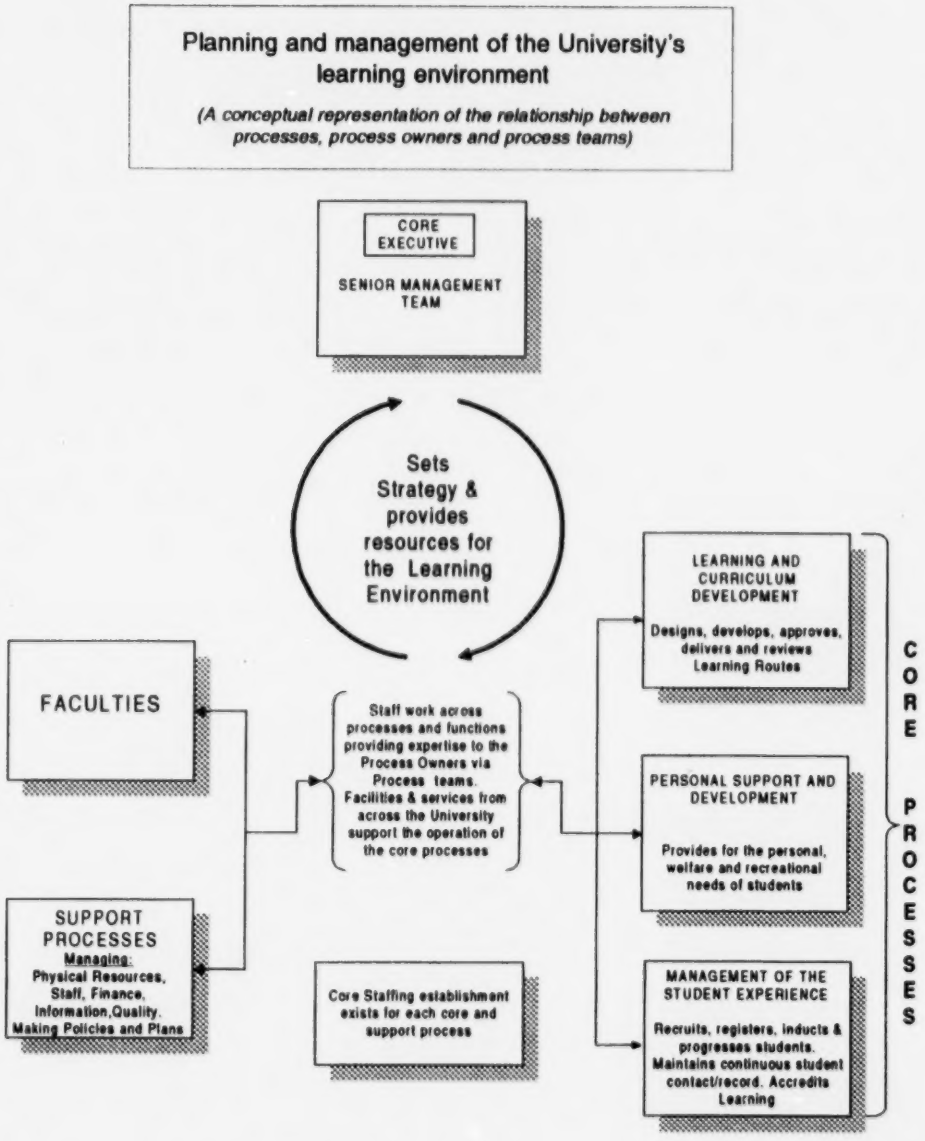
Principle 3	**Organizational structures should reflect the needs of the processes, not drive them**
Recommendation 19	Each process should have a process owner who is responsible and accountable for the success of its operation.
Recommendation 20	Each process should have a process manager responsible for the planning, management, implementation and review of the process.
Recommendation 21	A core staffing establishment should exist to support each of the processes.
Recommendation 22	The design, management and review of the processes should be supported by process teams operating across process and functional boundaries.
Recommendation 23	The roles and responsibilities of staff should be defined in relation to the overall needs of each process.
Recommendation 24	Each member of staff may have more than one role but should report to a single line manager who will be responsible for his/her personal development.
Principle 4	**The processes should be student (customer) focused**
Recommendation 25	Opportunities for greater student participation in the recruitment process should be explored.
Recommendation 26	Students should be more actively engaged in the learning process.
Recommendation 27	Peer support systems should be developed for students (and staff).
Recommendation 28	Students should have structured opportunities to provide feedback on all university services/processes and expect a prompt response to issues raised.

Principle 5	**The support processes should facilitate the operation of the core processes**
Recommendation 29	Budgetary models should be based on the resourcing of processes not functions *(managing finance).*
Recommendation 30	Staff capabilities and reward structures should be reviewed in relation to the needs of the processes *(managing staff).*
Recommendation 31	A comprehensive, seamless, open information system should be developed to meet the needs of all the processes *(managing information).*
Recommendation 32	The physical resources of the university should be maintained and developed to meet the needs of the processes *(managing physical resources).*
Recommendation 33	Systems should be developed for defining, maintaining and enhancing quality standards in all the processes *(managing quality).*
Recommendation 34	Processes for the making of policies and plans should reflect the need for integration within and between the processes *(making policies and plans).*
Principle 6	**Metrics should be available to assess the cost-effectiveness and quality of the processes**
Recommendation 35	The university should understand and measure the 'true' costs of the processes.
Recommendation 36	Indicators of 'throughput' should be developed to assess the 'added-value' of each process.
Recommendation 37	The university should further develop and make use of measures of student and staff satisfaction.

Recommendation 38	Process performance should be assessed against external benchmarks.
Principle 7	**The processes should be responsive to but not driven by external 'compliance' requirements.**

Appendix 6

A process-based scenario for planning and managing a university learning environment


Planning and management of the University's learning environment
(A conceptual representation of the relationship between processes, process owners and process teams)
CORE EXECUTIVE
SENIOR MANAGEMENT TEAM
Sets Strategy & provides resources for the Learning Environment
FACULTIES
SUPPORT PROCESSES
Managing:
Physical Resources, Staff, Finance, Information,Quality. Making Policies and Plans
Staff work across processes and functions providing expertise to the Process Owners via Process teams. Facilities & services from across the University support the operation of the core processes
Core Staffing establishment exists for each core and support process
LEARNING AND CURRICULUM DEVELOPMENT
Designs, develops, approves, delivers and reviews Learning Routes
PERSONAL SUPPORT AND DEVELOPMENT
Provides for the personal, welfare and recreational needs of students
MANAGEMENT OF THE STUDENT EXPERIENCE
Recruits, registers, inducts & progresses students. Maintains continuous student contact/record. Accredits Learning
CORE PROCESSES

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Appendix 7

Criteria for evaluating process improvement options

Delivers critical success factors

- Support the delivery of the university strategy
- Increased customer focus
- Improved staff morale/retention
- Enhance quality
- Eliminate non-value-added activity
- Reduce costs

  Promote cross-functional working
- Increase corporate flexibility

Time to implement

- Now
- For next academic year
- 2 years +

Cost to implement

- Low (<£10k)
- Medium (£10k – £100k)
- High (£100k – £1m)
- Unknown

Risk

- Low
- Medium
- High
- Unknown

Acceptability

- Minimal support with widespread resistance
- Common support with pockets of resistance
- Unanimous support with little resistance
- Unknown

Systems dependent

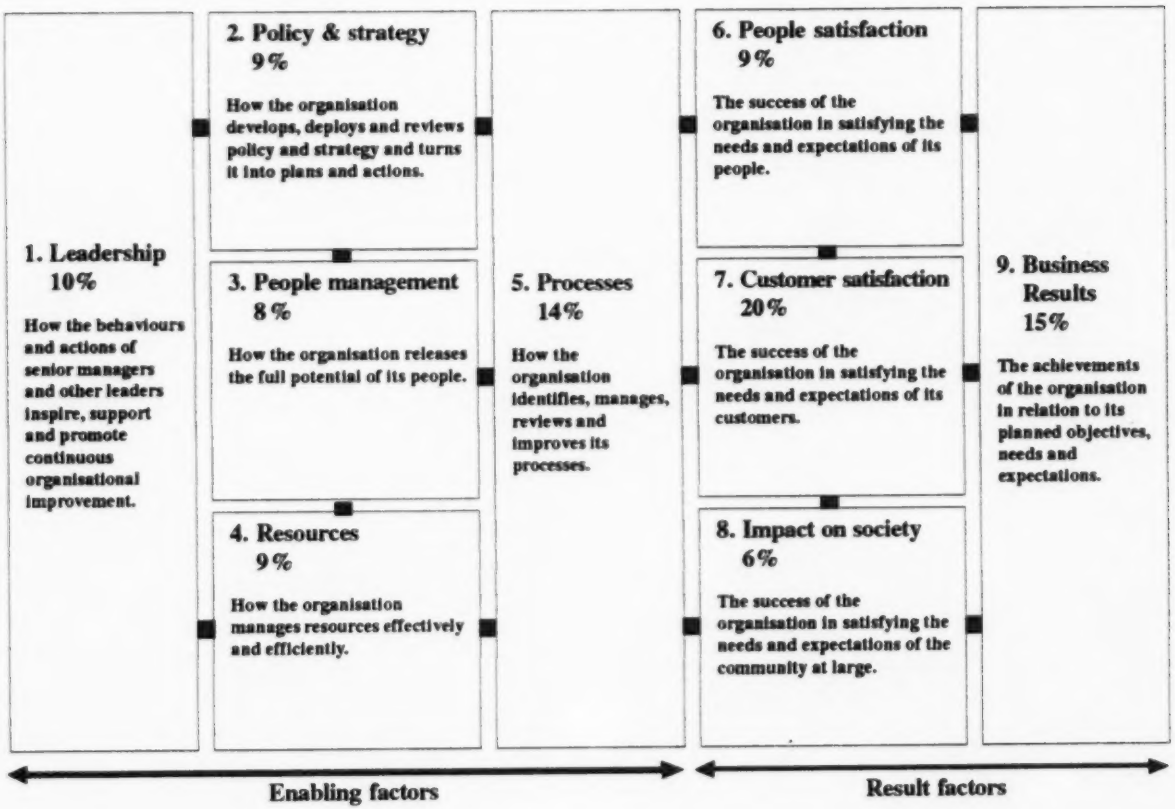
- No systems change involved
- Modification to existing systems required
- New system required

Organizational change dependent

- No reorganization required
- Minor reorganization required
- Major reorganization required

Appendix 8

The European Quality Award framework


1. Leadership
10%
How the behaviours and actions of senior managers and other leaders inspire, support and promote continuous organisational improvement.
2. Policy & strategy
9%
How the organisation develops, deploys and reviews policy and strategy and turns it into plans and actions.
3. People management
8%
How the organisation releases the full potential of its people.
4. Resources
9%
How the organisation manages resources effectively and efficiently.
5. Processes
14%
How the organisation identifies, manages, reviews and improves its processes.
6. People satisfaction
9%
The success of the organisation in satisfying the needs and expectations of its people.
7. Customer satisfaction
20%
The success of the organisation in satisfying the needs and expectations of its customers.
8. Impact on society
6%
The success of the organisation in satisfying the needs and expectations of the community at large.
9. Business Results
15%
The achievements of the organisation in relation to its planned objectives, needs and expectations.
Enabling factors
Result factors

134

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The book

This case study describes and critically evaluates two contrasting models of quality management, which have been used to support organizational development within De Montfort University, during periods of major internal and external change.

An account of the origins and development of both models is used to illustrate some of the critical issues that need to be considered in adopting a 'bottom-up' approach to quality management (focused on the needs and responsibilities of individual departments) or a more 'top-down' approach (centred on the corporate needs of a university and those of its client groups). The case study also considers some of the trade-offs that need to be made in choosing between models of quality improvement based on incremental or transformational change.

Whether at national, institutional or departmental levels, all quality systems should seek to promote the principles of quality ownership (self-assurance) and accountability (assurance of others). In this context the study identifies some of the organizational, technical and cultural issues involved in developing an approach to quality management that is responsive to the corporate and local needs of a university and those of its external stakeholders.

The author

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Working document

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